**Week 1**

Sunday 5/24

Updated to Xcode 6.3

* Resolved 2 GTL YouTube errors relating to nil comparisons

Monday 5/25

Brainstormed and wrote document “Work to Do”

* Product, Development, Hiring, Marketing

Researched using git with Xcode

* .gitignore files
* Practiced by placing SamvitJainCV on version control

Tuesday 5/26

Investigated FB expired access tokens bug

* Tried setting an active FB session as current session

Reading from address book (AB)

* Adapted sample code from Apple’s documentation to select/display single contact’s info
* Wrote code for saving name, phones (mobile + iPhone), and emails for all contacts

Pushed SamvitJainCV to GitHub

Wednesday 5/27

Integrated address book access in sign up flow

* Finished writing logic for extracting data from address book
* Saved address book info to Parse on account creation
* Changed linkWithFBVC to findContactsVC
  + Removed linkWithFB button and changed view text
* Wrote logic to determine LMU users among AB contacts

Thursday 5/28

Added AB contact suggestions code to Data.m

* Parse query for LMU users among contacts not included in friends or request lists
* FB suggestions loaded after address book suggestions

Initialized local git repository for LinkMeUp

* Created .gitignore file
  + Determined appropriate contents for Xcode 6 project
* Made several commits relating to project folder reorganization
  + Deleted Pods
  + Deleted some Echoprint materials

Posted job to Seattle Android Developers group on LinkedIn

Wrote Jobs page for LinkMeUp website

Friday 5/29

Pushed LinkMeUp to new private Github repository

* Reorganized folder, placing Replaced Files in subfolder of Classes
* Pushed several commits

Tested SMS sending with MessageUI Framework

* Could compose message, but failed to send

Fixed dequeueReusableCellWithIdentifier bug in contactsVC

Created SMS\_links branch in local git repository

Alphabetical organization of contactsVC

* Added index to contactsVC table
* Began alphabetical sectioning with NSPredicate filtering

Searched for Android developers through LinkedIn Recruiter Lite (Premium)

* Search by region, UW affiliation, and graduation date
* Sent InMail to 3 candidates and starred 10 others

Saturday 5/30

Rewrote contactsVC

* Introduced (NSMutableArray \*) tableContent to encapsulate all data and UI state info
  + Documented internal structure in contactsVC.m interface
* Factored out state toggling behavior and checkbox tagging into separate methods
* Removed All Friends option

Replaced expired development certificate

**Week 2**

Sunday 5/31

Moved AB data read/save function from LinkMeUpAppDelegate to Data.m

* Introduced local storage of AB data
  + Changed suggestions code to use local data
* Disabled FB suggestions

Committed changes to branch SMS\_links

Sending to non-LMU users

* Wrote logic for determining list of contacts that are not LMU users
* Refactored phone number comparison methods to Constants.m
  + Only two phone number variants considered - with and without country code
* Tried to resolve contactsVC dequeueReusableCellWithIdentifier bug
  + Inconsistency between cell and checkbox state
    - Outlined cell/clear checkbox and clear cell/green checkbox
  + Tracked indexPath and UIControl state of checkboxes across selection/deselection
  + Resolved by creating new cell every time in –cellForRowAtIndexPath
* Displaying LMU friends and non-user contacts
  + Contact added to link’s receivers field only if LMU user
  + Tried to use contact[@“objectId”] == nil comparison to determine whether contact is PFUser (user) or NSDictionary (non-user)
    - Comparison yields nil for PFUser as well as NSDictionary
  + Resolved by populating tableContent in two separate iterations
    - Non-user contacts listed after LMU friends

Committed changes to branch SMS\_links

* Multiline commit message with open single quotes

Contacted Shock Family about launch screen designs

Monday 6/1

Contacted Android developers through LinkedIn Recruiter

* Sent InMail to 5 candidates and PM to 1
* Revised and finalized message template

Added field @“nonUserContact” = @YES to non-user contact NSDictionary

* Tests whether field is nil to determine if LMU user
* Sorts array of all contacts and populate tableContent in one iteration
* Displays detailTextLabel “LinkMeUp” if app user

Tested +(BOOL)comparePhone1: withPhone2:

* Fixed variable name ambiguity

Changed PFQuery limit of 100 objects to 1000 for relevant Parse queries in Data.m

Reverted to populating tableContent in two iterations

* LMU friends and non-user contacts now sorted separately by name
  + LMU friends additionally sorted by username
  + “Name else username” sort descriptor not implemented

Pushed branch SMS\_links to GitHub with -u (--set-upstream) option

Researched sending text messages to multiple recipients without presenting Messages UI

* Sending SMS from User A to User B through Twilio

Tuesday 6/2

Messages UI presented on selecting non-user contact

* Constructs YouTube link if video
* Appends user annotation and “Sent via LinkMeUp, available at …”
  + Tried making LinkMeUp an HTML link to App Store
* (NSIndexPath \*) lastSelected field
  + Deselects recipient if text message cancelled
  + Takes to inbox if successfully sent

Considered UI flow for multiple non-LMU users and LMU friends/non-user combination

* Researched app deep linking

Sent InMail to 3 Android developers candidates

Obtained @linkmeupmessenger.com email domain through Google Apps for Work

* Created samvitj@, jobs@, and support@
* Updated website

Made LinkedIn page for LinkMeUp

Fixed build error in SamvitJainCV by targeting iOS 8 only

Learned Swift through Apple Guided Tour and Playgrounds

* Completed tutorial up to Functions and Closures
* Explored optional chaining, nil coalescing, type casting, and closure syntax

Wednesday 6/3

Committed and pushed changes to SMS\_links

* Tried out git checkout master command

Researched sending from external service using user’s phone number

* Tried to configure Twilio account/Parse cloud code (main.js) to send verification text from “LinkMeUp” instead of Auburn, WA number

Created two different text messages depending on whether user specifies link annotation

Added activity indicator to searchResultsVC

Committed and pushed changes to SMS\_links

* Used git commit -m amend “…” to revise previous commit message

Researched messaging to multiple recipients individually with Messages UI

Developed and implemented UI flow for selecting/sending to multiple users/non-users

* -animateSendButtonInDirection method written
* Four cases considered, depending on whether 1) user or non-user is selected and 2) if users previously selected
  + Created anyContactsSelected method which takes function argument to determine if any contacts selected, any users selected, or any non-users selected
* MFComposeMessageVC slow and laggy on iPhone 5/iOS 7

Tested on iPhone 6/iOS 8

* Found/resolved bug in pendingRequestsQuery
  + Nil assignment to (NSMutableArray \*) newPendingRequests for deleted user
  + Did not investigate stack trace for crashing/freezing thread
* Learned that ABAddressBookCreateWithOptions()returns non-null value even when access permission has not been granted
  + Data loading methods proceed as if address book is in fact empty

Wrote logic for presenting Messages UI for multiple non-user recipients

* Introduced queue nonUsersSelected
* Problem in presenting MFMessageComposeVC multiple times in succession (iPhone 6)

Thursday 6/4

Changed and finished UI flow for selecting/sending links to users/non-users

* Removed nonUsersSelected queue
* Selecting LMU users disables all non-users
  + Can send link to either 1 non-user or multiple LMU users

Contacted 2 more Android developer candidates

* Customized message extensively

receiversData for link sent to non-user contact

* Created isText field on Link class to record if link sent to in-app users or as text message
* Displayed alias name “Text sent to \_” in inboxVC

Committed and pushed changes to SMS\_links

Completed Objects and Classes section of Apple’s Guided Tour of Swift

Committed and pushed changes to SMS\_links

“Recents” section in contactsVC table view

* Considered dynamically calculating recent link recipients from sentLinkData
* Introduced PFUser property recentRecipients in Parse and Data.m
* Updated logic in contactsVC (-postLinkAndSendPush, -populateTableContent, and –viewForHeaderInSection)
  + Remove redundant saveInBackgroundWithBlock call in -postLinkAndSendPush

Committed and pushed changes to SMS\_links

Friday 6/5

Finished “Recents” section in contactsVC table view

* Content for “Recents” section set in –populateTableContent
  + Resolved "NSInternalInconsistencyException, Key “isText” has no data, Call fetchIfNeeded before getting its value” error message/crash by clearing incorrect data in Parse column recentRecipients
* Counterpart for cell in “Recents” section selected with call to [self.tableView reloadData]
* recentRecipients array reversed in table view to present most recent first
* “Recents” section skipped in -postLinkAndSendPush to prevent double sending
* Set section index title for “Recents”
  + Unicode character for watch defined in Constants.h

Committed and pushed changes to SMS\_links

UI improvements to contacts VC

* Footer to tableView added when send link button present
* Created subclass of UITableViewCell
  + Main text label shortened (text automatically truncated with ellipses)
  + Image view added to all cells
    - App icon for LMU users
    - Messages icon for non-users

Committed and pushed changes to SMS\_links

Sent InMail to 2 Android developer candidates

Started work on labeling Send Link button with all link recipient names

* Introduced selectedRecipients field in contactsVC (and -updateRecipientList method)
* Added UITextView in contactsVC.xib file and started –updateSendButtonText method

Found bug in “Recents” section logic

* Tested on iPhone 6
  + Selecting and sending to non-user contact adds extra (wrong) contact to Recents section
  + Sending to multiple LMU users adds duplicate entries
* Issues identified
  + Selected state not set to YES for non-user contacts in –toggleStateForIndexPath before Messages is launched
  + recentRecipients field saved in loop instead of outside in –postLinkAndSendPush

Saturday 6/6

Fixed bug in “Recents” section log

* Caused by accidently modifying self.sharedData.recentRecipients instead of self.selectedRecipients in –updateRecipientList (new method)
* Moved code saving recentRecipients to Parse out of for loop
* Cell state set before message compose interface displayed in –toggleStateForIndexPath
  + Used [self.selectedRecipients count] to determine table view state

State variable nonUserSelected replaced by use of (BOOL) nonUsersDisabled and self.selectedRecipients

Tested memory usage of contactsVC table view with Instruments

* Insignificant compared to memory usage of inboxVC, linkVC, and searchResultsVC

Committed and pushed changes (twice) to SMS\_links

Continued work on Send Link button label

* Tried disabling vertical scroll by setting button contentSize
* Introduced programmatically created textView to replace recipientTextView created in IB

Researched best practices for declaring dictionary keys as constants

**Week 3**

Sunday 6/7

Setup GitHub repository LinkMeUp-Android for Android app

Researched marketing components and strategies

* YourAppReport.com checklist and packages, 148apps.com, and Quora answers

Decided on Adobe Photoshop (vs. Gimp) for app launch screen

Created scrollable label containing recipient names for Send Link button

* Embedded UILabel inside UIScrollView
* Set UIScrollView contentSize and UILabel frame to expand dynamically with text length
  + ScrollView contentOffset dynamically updated to show right end of name string
* Used first names if possible
  + Introduced key @“first\_name” to address book contacts’ NSDictionary

Committed and pushed changes to SMS\_links

Started reading objc.io/ document “Android 101 for iOS Developers”

Improvements to Send Link button scrollable label

* Disabled touch event causing button press on left end of button
  + Adjusted scrollView frame to begin at left end of button
  + Set up method –updateSendButtonLabel with global constants leftOffset and rightOffset declared in Constants.h
* Allowed touch event on blank space to right of name string to cause button press
  + scrollView frame also set to match length of name string, if shorter than original frame width
* Tried to set textLabel highlighting behavior on click to match that of UIButton title label
  + Set highlightTextColor and declared selector and target method for UIButton
  + Could not detect event to unhighlight textLabel at right time

Searched for Android developers in local network

* Sent InMail to 2 more candidates

Monday 6/8

Read “The Right Way to Ask Users for iOS Permissions” (LinkedIn)

Added case to findContactsVC and verificationVC dismiss flow for existing user

* Existing user case not tested

Interview (phone screen) with Calvin Hsieh

Matched textLabel highlighting behavior to Send Link button titleLabel highlighting

* Implemented target methods for touch events DragExit and DragEnter
* Animated change in textLabel transparency
* Tried enabling button press when Send Link button textLabel/scrollView tapped
  + Experimented with UITapGestureRecognizer and its delegate
  + Considered using touchesBegan: withEvent: to detect beginning of touch
    - Requires subclassing UIScrollView, so decided against it

Committed and pushed changes to SMS\_links

Changed SMS link content

* Removed phrase “Check out…” from blank annotation case
* Added short Twitter download link to end of text message
  + Tried Apple short link www.appstore.com/linkmeup
    - Didn’t work on mobile
  + Tried itms:// to link directly to App Store (avoid redirect)
* Researched adding HTML link and embedded YouTube video to text message

Push notification permissions flow

* Introduced pushNotifViewController
  + Added informative message explaining why notifications are important to user
  + Added iPhone 6 screenshot of Banner notification
    - Configured for iPhone 6, but not iPhone 4 or 5
    - Linker error when running app on iPhone 5s simulator
* Moved permissions request from DefaultSettingsVC to pushNotifVC
  + Added boolean field to PFUser called didAskPush
  + pushNotifVC presented after first sent link or after second app launch, whichever comes first

Committed and pushed changes to SMS\_links

Tuesday 6/9

Moved presentation of push notif screen in inboxVC to occur after links finish loading

Introduced macros detecting iPhone 4 - 6P in Constants.h

* Used to conditionally set screenshot frame in pushNotifVC
* iPhone 5, 6, 6P Simulator screens all detected as iPhone 5

Duplicate symbol for architecture i386 linker errors when building for simulator

* Resolved by declaring consts in Constants.h as static

Tested pushNotifVC screenshot on iPhone 5s simulator and inboxVC presentation on iPhone 4s device

Reorganized Constants.h/.m files

* Declared consts as extern in Constants.h and defined in Constants.m to avoid multiple imports and follow best practices
* Added #pragma mark section headers
* Began declaring NSNotification names and dictionary keys as string constants.

Committed and pushed changes to SMS\_links

Introduced better macro definitions for detecting iPhone 4 - 6P

* New definitions didn’t work either (iPhone 6 device detected as iPhone 5)
* Resolved issue – missing iPhone 6 launch screen results in iPhone 5 screen size setting
  + Temporarily disabled iPhone 6 and 6P macro options

Push notification screen for users who have denied access permission previously

* Created method in AppDelegate called –getEnabledNotificationTypes
  + Contains iOS version conditional logic for determining enabled notifications previously contained in -applicationDidBecomeActive
  + Returns UIUserNotificationType
* Introduced (and tested) alert in pushNotifVC requesting user to turn on push notifications from Settings panel
* Introduced NSInteger field to PFUser called numberPushRequests
  + Push notification screen presented if UIUserNotificationType is None and if numberPushRequests < PUSH\_REQUESTS\_LIMIT
  + Began replacing old logic involving didAskPush

Wednesday 6/10

Conditional presentation of pushNotifVC

* Notifications must be turned off – UIUserNotificationType is None (6/9)
* numberPushRequests < PUSH\_REQUESTS\_LIMIT
* Didn’t already present pushNotifVC in this PFUser session
  + Introduced NSUserDefaults field to track if pushNotifVC already presented
  + Not working – didAskPushThisSession always @NO in -launchReturning

Committed and pushed changes to SMS\_links

Enabled sending to suggested friends and friend request senders in contactsVC

* Section “LMU users” added to contactsVC table if number of LMU connections small

Committed and pushed changes to SMS\_links

Interview (technical) with Calvin Hsieh

Finished push notification permission and re-request flow

* Fixed NSUserDefaults bug - didShowPushVCThisSession now set in AppDelegate instead of viewDidAppear of DefaultSettingsVC (to prevent reset)
* Changed pushNotifVC screenshot to New Link image (instead of Loved Link)
* Returns to app only if user selects *some* option on default push notification alert view
  + Used two NSUserDefault fields in AppDelegate to track whether app temporarily exited (alert view shown)
  + If default alert view not shown, custom alert view presented after 1 second
  + Tested flow on iPhone 4s, iPhone 5s (simulator), and iPhone 6

Committed and pushed changes to SMS\_links

Searched for Android developers on LinkedIn

Thursday 6/11

Introduced conditional App Store link to text message

* Appends App Store link if greater than SEVERAL\_RECENTS recent contacts

Address book permission and re-request flow

* Introduced field numberABRequests and macro MANY\_CONNECTIONS
* Created method in friendsVC to determine if findContactsVC should be presented
  + Method call in –viewWillAppear, then moved to -viewDidLoad to avoid warning
  + Create NSUserDefault didNotYetEnterFriendsVC to avoid presentation to new user during first visit to friendsVC

Sent InMail to 7 Android developers

Address book screenshot

* Introduced screenshots AddressBook4 (iPhone 4) and AddressBook5 (iPhone >=5) to illustrate permission requested

Investigated crash on background thread during signup flow in findContactsVC on line

if (ABAddressBookGetAuthorizationStatus() == …NotDetermined)

* Used presence of shared data model to determine if findContactsVC presented in signup flow (as opposed to friendsVC)
  + Replaced by use of NSUserDefault didNotYetEnterFriendsVC
  + Crash still persists

Friday 6/12

Tested sign up flow – no crashes in findContactsVC

Moved presentation of findContactsVC to –viewWillAppear in friendsVC

Modified address book and push notification custom alert view message

Presentation of findContactsVC in contactsVC

* Introduced –hasContacts method
  + Fixed mistake in –didFinishLoadingConnections logic
  + findContactsVC presented after 1 second of viewDidLoad if permission not granted, less than AB\_REQESTS\_LIMIT requests, and 0 contacts

returnAndLaunch logic in findContactsVC

* Check if presenting view controller is verificationVC to determine if in sign up flow
* Dismiss presenting view controllers appropriately

Changed confusing didNotYetEnterFriendsVC property to didEnterFriendsVC

* findContactsVC presented in viewDidLoad of friendsVC if old user
* findContactsVC resented on second viewWillAppear if new user

Committed and pushed changes to SMS\_links

Added Documents folder to master and merged branch SMS\_links into master (3-way merge)

Reintegrated Facebook connections as a source of friend suggestions

* Parallel queries for LMU users among address book contacts and among Facebook friends in –loadSuggestions method in Data.m
* When both queries finished, suggestions lists merged
* Introduced sharedData property hasAddressBookAccess

Committed and pushed changes to master

Tried to configure iPhone 6 launch screen

* Deleted derived data, reset iPhone, checked that “Launch Screen File” was unselected

Researched mobile music streaming services and SoundCloud API

Posted job to Lakeside Hackers group and messaged Newport Computer Group admin

Saturday 6/13

Committed and pushed changes to master

Posted job to Newport Computer Group and messaged Skyline groups admin

Created branch single\_search

Removed send song option from searchViewController

Tested different search bar configurations and searchVC UI layouts

* Tried orange header and using a navigation bar
* Set searchVC background to white

Fixed button array bug/crash in friendsVC

* Created initializeSuggestionButtons and initializeRequestButtons methods to replace lazy instantiation of buttons (which didn’t work)

Researched mobile music streaming services – Spotify, Rdio, Last.fm, Bop.fm

Posted to Skyline Class of 2016 Group and replied to applicant questions

**Week 4**

Sunday 6/14

Tried to configure iPhone 6 launch screen by using xib file

Researched bop.fm

Search bar and searchVC appearance

* Set autocomplete row height based on device type for new
* Experimented with different color schemes (header/screen/button)
* Experimented with different search bar styles and positions
* Activity indicator for autocomplete results
  + Added to searchDisplayController tableView to replace “no results”
  + Stopped animation on main thread after autocomplete results load

Investigated blocking of user interface when sent and received links load (especially pronounced on LTE on iPhone 6)

* Tried loading link art on low priority concurrent queues (instead of default)

Tried to configure launch screen by also setting iPhone 5 screen and using Apple screen names

Messaged Interlake and Tesla High Facebook group admins to post hiring message

Committed and pushed changes to single\_search

Monday 6/15

Changed simulated size of all xib files to iPhone 4-inch

Enabled Launch Screens for iPhone 5 and 6

* Added UILaunchImages array to LinkMeUp-Info.plist file

Experimented with search bar text field

* Found text field via by traversing subviews of UISearchBar in –layoutSubviews method
* Customized text field layer.borderColor, borderStyle, frame, and font

Experimented with animation of search bar

* iOS 7 – no animation occurs if frame animated in search bar delegate methods (beginEditing, endEditing) or keyboard notification delegate methods (willShow, WillHide)
* iOS 8 – animation glitch; search bar returns to original position after animation

Enabled Launch Screen for iPhone 4

Configured DefaultSettingsVC background to match Launch Screens

* Added full screen subview of appropriate size (using IS\_IPHONE\_5 macro)
* Adjusted loading/welcome label frame in sign up flow

Compared YouTube VEVO and syndicated video queries

* VEVO videos (apparently) now syndicated, so included in both lists
* Removed videoSyndicated = @"true" in non-VEVO query and could not find unplayable video (among queries for “maroon 5”, “kendrick lamar”, and “taylor swift” with maxResults = 10)
* Set maxResults for syndicated query to 15 if iPhone 5 or above
  + Tested by playing videos and loading ~200 links – no memory pressure warning

Stanford CS 193P, Winter 2015

* Finished Lecture 1: Logistics, iOS 8 Overview (~30 min)
* Started Lecture 2: More Xcode and Swift, MVC (~10 min)

Tuesday 6/16

Compared GTLQueryYouTube results for syndicated = any, true with web results

* Top 10 results for “stephen colbert” same whether syndicated = any, true
  + Matches web results, though order is not the same
* Top 30 results for “maroon 5” when syndicated = true *excludes all VEVO videos*
* Top 10 results for “key and peele”, “epic rap battles”, and “collegehumor” match web results when syndicated = true (with slight variations in order)

Send to self option

* Set display name to “me” in inboxVC and name + “ (me)” in contactsVC
* Self receiver data entry not presented in sentLinkVC message table
  + Resolved fast enumeration bug by adding break statement after removing object

Removed contact from “LinkMeUp Users” section in contactsVC if already present in “Recents”

Disabled messages button in sentLinkVC toolbar if link is text message or only sent to self

Moved recent recipients loading statement to beginning of –loadSuggestions method in Data.m

* Resolved bug in which “Recents” section would be empty if no address book access

Committed and pushed changes to single\_search

Tried to resume YouTube audio playback after pause on app exit

* Tried listening for AVAudioSessionInterruptionNotification – never called

Interview (phone screen) with Sean Yu

Tried to find API information for trending videos on YouTube

Changed push notification screenshot to image of badged app icon (PushNotifBadge.jpg)

Experimented with search bar height and drop shadow

* Found UIImageView subview of searchDisplayController.searchResultsTableView
* Tried to adjust frame in viewDidAppear and –searchBarShouldBeginEditing

Continued watching Lecture 2: More Xcode and Swift (~20 min)

Messaged ICS Class of 2015 admin

Wednesday 6/17

Brainstormed marketing and release work to do

Redesigned searchVC

* Introduced magnifying glass icon and multiline caption
  + Tested three different images and adjusted image/caption colors
* Moved YouTube search bar to top of view (adjacent to header) and enabled gray border
* Removed (hid) search bar button
* Animated icon and caption on search bar click
  + Screen content moved up and down in -searchBarShouldBeginEditing and –searchBarShouldEndEditing delegate methods
  + Configured animation parameters for iPhone 4 and iPhone 5+

Interview (technical) with Sean Yu

Addressed some special cases involving icon and caption animation

* Scroll gesture on searchDisplayController table view results in call to –searchBarShouldEndEditing, but should not shift content back
  + Content shifted back only if searchDisplayController is not active
  + This change breaks correlation between up/down animations
* Introduced BOOL shiftedContent to track state of screen contents
  + Content position reset in viewWillAppear via –resetScreenContents
* Click on header dismisses keyboard, but –searchBarShouldEndEditing not called so content does not shift down (as it should)
  + Screen contents moved down in –handleTap if tap falls outside table view
* Remaining case: screen contents move down after autocomplete result is selected (due to call in –handleTap) but should not for best user experience

Thursday 6/18

Fixed contactsVC sendLink button bug

* Selecting LMU user, going back to searchResultsVC, and returning to contactsVC previously caused sendLink button to disappear
* Instead of animating button frame on selection/unselection, animated autolayout constraint

Addressed undesirable shift down of searchVC content on hitting “search”

* Screen contents only shifted down in -handleTap if user taps in header view
  + Used –locationInView and -hitTest:tappedPoint to determine view tapped (required because tap gesture recognizer is added to *superview*)
* Autocomplete entries now easier to select (added benefit)
  + Table view and keyboard not dismissed if UITableViewCellContentView selected

Tried to address searchDisplayController table view scroll behavior

* Scrolling table hides keyboard but leaves content shifted up (undesirable)
* Returned NO in –searchBarShouldEndEditing delegate method if searchDisplayController active
  + Caused undesirable, irreversible disappearance of keyboard on leaving and returning to searchVC

Fixed bug in “Recents” section of contactsVC

* Recent LMU recipients not displaying if LMU Users section present
  + Recents section previously populated by searching for user in tableContent and creating pointer to existing contactAndState dictionary
  + Added logic on Tuesday (6/16) in which entries present in recentRecipients are omitted from “LMU users” section
* Resolved by creating new contactAndState dictionary for LMU users in “Recents” section if “LMU Users” section present (total number of contacts is small)

Addressed slow link art loading by replacing synchronous [NSData dataWithContentsOfURL:] with [[NSURLSession sharedSession] dataTaskWithURL: completionHandler:]

* Link art now loads much faster and without (noticeably) blocking UI
  + Loading 28 links – 1.13 seconds with LTE and 0.03 seconds with Wifi
  + Loading 203 links – 5.1 seconds with LTE and 0.2 seconds with Wifi
* Researched proper usage of NSURLSession

Researched and experimented with lldb Xcode debugger

* Printed object values (with po command) to determine crash of occasional crash after logging out and quickly logging in again with Facebook

Researched caching on iOS file system

* Learned that data that needs to persist between app launches but can be recreated (downloaded) as needed should be stored in Library/Caches/

Committed and pushed changes to single\_search

Friday 6/19

Replaced all (active) instances of dataWithContentsOfURL and NSURLConnection with NSURLSession in searchVC, songInfoVC, and searchResultsVC

Tested common flows and user actions

* Tested signup flow on iPhone 6 with permissions on, denied, and not determined (for push notifications)
* Tried sending/accepting friend requests between iPhone 4 / iPhone 6
  + Push notifications did not trigger content load while in app on Badge push notification setting
  + Reverted to repeating, 10-second interval updates for Badge setting

Committed and pushed changes to single\_search

Set lastSenderUpdateTime on master link copies to match new user account creation time (instead of master link creation time)

Replaced old, photoshopped launch screens with new ones from IconShock

* Removed unused image folders (Login/Signup Background and Logos)

Committed and pushed changes to single\_search

Changed sendLink button behavior in contactsVC to trigger button action if names label pressed

* Tried to configure long press gesture recognizer to detect *touch* event and highlight text label – delegate method not getting called

Changed email verification setting to YES in Parse

* Configured SPF record in Weebly website settings to prevent spam filtering of emails from parseapps.com
* Uploaded user\_management file to hide Parse.com from app users during email verification/reset process, and instead display page on LinkMeUp domain

Researched screenshots and add message function of competing apps Rithm and PingTune

Changed logic in -handleTap: in searchVC to address UX bug

* Instead of testing if touch landed in header, now test if touch landed in any view except table view or cell content view

Committed and pushed changes to single\_search

Tested poor network connection behavior

* Discovered crash in friends tab when running app with poor Wifi connection
* Read Apple documentation on Real-World Networks
* Learned about and tested Network Link Conditioner tool

Saturday 6/20

Fixed bug/crash in friendsVC seen in poor Wifi connection after replicating with Network Link Conditioner

* Request/suggestion buttons now initialized in viewDidLoad regardless of whether loadedAllConnections is true
* Buttons re-initialized in delegate method -didFinishLoadingConnections if mismatch between number of contacts and number of associated buttons
* Introduced constants for NSNotifications loadedFriendRequests, loadedFriendList, and loadedConnections

Change data reload time interval to 30 seconds in AppDelegate.

Researched and tried implementing NSURLSessionConfiguration to set up NSURLSession’s in-built cache usage policy

* Followed Apple Documentation to setup defaultConfig object with cache path at /Library/Caches/ directory and NSURLRequestUseProtocolCachePolicy
* Sample code first placed in –loadReceivedLinks and –loadSentLinks
  + Warning messages logged
    - \_CFURLCache:RecreateEmptyPersistentStoreOnDiskAndOpen: create tables index failed
    - ERROR:\_CFURLCache:CreateTablesAndIndexes pragma auto vacuum - database is locked. ErrCode: 5
* Moved code first to AppDelegate (required importing AppDelegate in Data.m, which caused compiler errors) and then to separate initialization function in Data.m
* No noticeable speedup with using NSURLSession’s sessionWithConfiguration: self.defaultConfig over sharedSession
* Disabled and moved code to Data Caching section in Data.m

Committed and pushed changes to single\_search

Browsed top 100 songs, comedy videos, and movie clips to include in screenshots and as prepackaged links

* Found Uptown Funk (feat. Bruno Mars), Ghost (Ella Henderson), Waves (Mr. Probz), and Riptide (Vance Joy)
* Changed two prepackaged links
  + Halo | Beyonce to Ghost | Ella Henderson
  + Thank You | Dido to Waves | Mr. Probz

Investigated broken email reset/verification links

Fixed crash when loading data in account Test

* Empty strings assigned to receiverData name and identity fields if null

Created inboxVC screenshots with Uptown Funk, Sugar, Apple Watch, and Stolen Dance

* Compared simulator vs. device screenshots
* Tested with frames on mint and orange backgrounds

Added case to -handleTap method in searchVC

* Tap on search bar cancel button after returning from searchResultsVC no longer dismisses table view (instead, clears search bar)

Accidently amended changes to previous commit rather than creating new commit

* Made corrections to incorrect re-commit with further amends
* Used git reflog to view unabridged repo history
* Used git reset --soft HEAD@{3} to return repository to state before mistaken amend
* Readded project and created new commit
* Used git push origin single\_search –force to push changes to public repo (and rewrite its history)

**Week 5**

Sunday 6/21

Looked for videos to include as prepackaged links

* Looked through Inglorious Bastard movie clips and 2014 and 2015 Super Bowl ads
* Found Elon Musk: How I Became the Real ‘Iron Man’, Jennifer Lawrence on David Letterman, and Kim Kardashian T-Mobile ad

Sent new prepackaged links from LinkMeUp H.Q. account

* Tested new account creation on iPhone 4 and iPhone 6

Created employment contract

* Started free trial with LawDepot
* Defined start and dates, job description, compensation, place of work, vacation time, and confidentiality/non-compete agreement durations

Created “Select Video” screenshot

* Found Fun ft. Chris Brown by Pitbull
* Tried to change Chalkboard SE font to Gill Sans
* Created screenshot with proper push notification configuration on iPhone 4s, iPhone 5s, iPhone 6, and iPhone 6 Plus simulators

Brainstormed work to do and required time for Android application

Monday 6/22

Looked for movie clips to include as prepackaged links

* Looked through Dark Knight trilogy, Inception, and Skyfall
* Found Inception ending scene and 500 Days of Summer trailer

Sent revised list of prepackaged links from LinkMeUp H.Q. account

Researched salary for high school software engineering interns

Staged and created Inbox, Search, Send To, and Link screenshots

* Set up Sent tab in Test account inbox with links/reactions for Inbox screenshot
* Compared Select Video screenshot in gray and white background
  + Decided on gray background
  + Decided to use Search screenshot instead for second mobile App Store screenshot
* Researched screenshot requirements, guidelines, and recommendations
* Set up address book on iPhone 4 and 6 for Send To screenshot

Pushed changes to single\_search

Merged branch single\_search into master and pushed changes to remote

Created captions and frames for all screenshots

* Changed Inbox screenshot to include better title for Kim Kardashian Super Bowl ad
* Used Uptown Funk for Link screenshot instead of Love on Top
* Finalized captions for all 5 screenshots
* Helped develop frames and adjust caption positions for iPhone 4 / iPhone 6 screenshots

Updated App Store description document to focus on video sharing

Emailed Sean Yu to confirm in person meeting on Tuesday 6/23

Contacted Ishan Narula on Facebook and email, describing LinkMeUp internship opportunity

Committed and pushed changes to master

Uploaded iPhone 4 and iPhone 6 screenshots to iTunes Connect

* iPhone 6 screenshots with alpha channels and transparencies initially rejected
* Still pending – frames for iPhone 5 and iPhone 6 Plus screenshots

Tuesday 6/23

Prepared for in person meeting with Sean Yu

Met with Sean Yu and made summer internship offer

Update Version 2.0 submission info on iTunes Connect

* Added iPhone 5 and 6 Plus screenshots
* Updated Name, What’s New in This Version, Description, Copyright, and Keywords

Committed and pushed new screenshots to master

Update text message link content

* Removed condition (number of recent recipients > MANY\_RECENTS) on including App Store link
* Moved annotation to beginning of message (in front of URL)
  + Considered adding line break if last character of user annotation is punctuation mark and hyphen otherwise

Tested sign up flow on iPhone 4 (phone reset)

* Email verification switched to YES, but with Parse pages displayed
* Address book and push notification permission screens tested

Read about analytics and App Store keywords

* Modified App Store keywords to include “chat”, “free”, and “text” instead of “social” and “friends” after searching for popular messaging apps on https://sensortower.com/
* Read about campaign links on iTunes Connect
  + Began creating Google AdWords campaign for app to better understand Google users’ search behavior

Interviewed Ishan Narula (phone screen)

Finalized employment contract and sent to Sean Yu

* Tried creating contract with FormSwift
  + Contained unfavorable provisions
* Modified LawDepot contract on MS Word, deleting some bullet points and adjusting numbering accordingly
  + Considered highlighting relevant clauses
  + Instead created list of important sections to read
* Started DocuSign free trial
  + Tested by sending contract draft to samvit.jain@gmail.com
* Sent finalized PDF copy of contract via DocuSign link to Sean

Wednesday 6/24

Replied to Sean’s questions about Employment Contract

* Did more research on non-compete agreements

Emailed Mr. Minsk to get input on non-compete clause

Connections reloaded in findContactsVC if address book access granted (existing users)

Added PFUser column hasAddrBookAccess to track user's address book access permissions state

* State updated in Data.m's -updateAddressBookStatus method
* Used NSNumber numberWithBool to encase data model property as object for Parse

Addressed push notification alert view issue/crash (seen on Mom’s iPhone 4 / iOS 7.1.2)

* Removed call to dismissAndReturn from -didFailToRegister delegate method
  + Considered using additional NSUserDefault flag to track whether –didFailToRegisterForRemoteNotifications was called
* Moved code clearing NSUserDefault flags to dealloc
* Cleared NSTimer and set alert view delegate to nil in viewDidDisappear
  + Required creating view controller properties self.alertView and self.alertController
  + Properties initialized in viewDidLoad, instead of presentCustomAlertView
* Tested changes
  + Downloaded iOS 7.1 simulator
  + Tested pushNotifVC flow on iPhone 4s simulator (iOS 7.1 and iOS 8.3), Mom’s iPhone 4 (iOS 7.1.2), my iPhone 4s (iOS 7.1.1), and Ananya’s iPhone 6 (iOS 8)
  + Delay in calling AppDelegate method willResignActive after default alert view presented on Mom’s iPhone
    - Results in presentation of both default and custom alert views
    - Problem not present in last test on Mom’s iPhone
  + Tests on simulators / other phones successful

Committed and pushed changes to master

Set up Android development environment

* Updated Java Development Kit (jdk) and Runtime Environment (jre)
* Downloaded Eclipse
* Installed Android Developer Tools (ADT) and SDK packages

Researched production vs. development Parse databases and git workflows

* Read articles on git-flow (Vincent Driessen) and GitHub flow (Scott Chacon)
  + Learned about use of --no-ff flag to create separate merge commit

Modified non-compete clause in Employment Contract

* Defined “project or venture in competition” more specifically
* Excluded employment on an unrelated project at a big company from scope of clause
* Considered specifically defining nature of LinkMeUp’s business (music and video messaging, link sharing, spreading third party-generated content) in contract

Disabled NSLog messages from code, if not running in debug mode

* Added preprocessor macro DEBUG = 1

Committed and pushed changes to master

Prepared project for submission

* Change version and build to 2.0
* Created, validated, and exported archive as .ipa file

Explored Android codebase

* Viewed LinkMeUp-Android repository files on GitHub
* Tried to build Android project locally

Installed GitHub GUI for Mac

* Added and explored three local repositories

Thursday 6/25

Emailed Mr. Minsk modified non-compete agreement

Went through NSLog statements to ensure no critical code commented out in release version

Researched App Store name and keywords

* Changed named to “LinkMeUp!” for better branding

Uploaded archive to iTunes Connect and submitted application

Committed changes to master and tagged as v2.0

* Researched tagging and pull requests

Started implementing git development/production workflow

* Created branch develop via git checkout -b develop master
* Cleared unwanted, unstaged change via git checkout -- <filename>

Pushed archive commit to remote master

Created PowerPoint for Sean Yu

* Moved out of Documents folder to avoid git tracking of confidential information

Revised and sent new employment contract

* Modified non-compete agreement again based on Mr. Minsk’s language suggestion
* Created account and document on RightSignature
* Sent for signature to Sean Yu

Researched marketing

* Read about writing Press Releases and creating a Press Kit
* Read about the importance of having an app demo/promotional video
  + Contacted several app video developing services
    - Epipheo, Breadnbeyond, PreApps, AppDemoVideos
  + Found but did not contact
    - Apptamin, RawAppVice, Snappdemo
  + Watched several successful app videos
    - Mailbox, Messenger Valley, Music Messenger
* Created Reddit account

Started work on app video

* Used QuickTime to record iPhone 6 screen videos
  + Added to Documents/Promotional
  + Removed from source control via git rm --cached <filename>
    - Added files of type .mov to .gitignore to prevent future tracking
* Purchased song Waves to use as background music
* Set up iPhone for testing
  + Deleted unwanted sent/received links from Test account in Parse
  + Modified contactsVC contact list in new branch contactsVC-app-video
* Tried to import song into iMovie
  + Could not find timeline
* Downloaded Adobe Creative Cloud (Premiere Pro)
  + Created new project
  + Imported iPhone 6 screencast and Waves into timeline
  + Tried to adjust video frame/aspect ratio

Committed and pushed changes to develop

Friday 6/26

Conducted first day of work orientation for Sean Yu

* Exported data from Parse database and imported into development app LinkMeUp-Dev
  + Tested development app by using Parse keys for LinkMeUp-Dev in code
  + Created separate constants for development and production keys
* Added Sean as collaborator to LinkMeUp-Dev database and Android GitHub repo
* Answered questions on Skype and phone call

Created test app video

* Added iTunes track audio to Video 1 screencast

Started compiling list of beta testers

Exported and uploaded test app video

* Exported higher quality video “AppVideo – Test.mov” with HD1080i preset for QuickTime format
* Created YouTube account for samvitj@linkmeupmessenger (LinkMeUp)
* Uploaded test video to YouTube

Developed actual app video

* Set up account Will Hanson for screencast capture
  + Created account, added friends, sent links
* Shot two videos – “Video - Full” and “Video - Full 2”
  + Spliced videos together, combining best parts
* Changed code in branch contactsVC-app-video to display more VEVO videos
  + Used git stash to save uncommitted changes in branch develop
  + Made changes to branch contactsVC-app-video
  + Reverted working directory to original state via git stash pop
* Exported video “LinkMeUp Video.mov”
* Replaced iTunes track “Waves” with VEVO version audio (longer instrumental)
* Exported video “LinkMeUp Video – 2.mp4”
  + Optimized for web playback by using H.264 format and HD 1080p 29.97 preset

Refined app video

* Reshot horizontal scroll clip
  + Wanted clip with smooth scroll and few/no mistakes while typing message
* Edited ending to include longer movie trailer clip
* Exported video “LinkMeUp Video Final”
  + Researched frame rate, bitrate, and frame blending
  + Selected “Render at Maximum Depth” and “Use Maximum Render Quality”

Saturday 6/27

Read article on use of video for app marketing

* Found out about embedding video service Wisita

Prepared for and shot forwarding clip

* Removed App Store link and changed header of songInfoVC to “Forwarding…” in contactsVC-app-video branch
* Shot “Received Links Pause”, “Forwarding 1”, and “Keyboard Dismiss”
* Decided to edit clips instead of shooting further
* Exported mp4 video with link forwarding

Researched video uploading/embedding and how best to contact bloggers

Set up Google Apps billing

Exported with “match sequence settings” option

* Mpeg video with vertical black bar of 15 pixels on right (624 x 1080)
* Researched how to export video with non-standard dimensions (609 x 1080)

Cut mp4 video with online-video-cutter.com

Uploaded videos to website

* Uploaded mpeg directly to Weebly
  + Pro account required to publicly publish
* Read “10 reasons why you should never host your own videos”
* Decided to embed video hosted by external service
  + Made Wisita account and uploaded video
    - Embedded inline with html code
    - Adjusted dimensions, but resolution poor
  + Made Vimeo account and uploaded video
    - Embedded inline
    - Better resolution

Updated .gitignore with .mp4 and .mpeg format videos

Committed and pushed changes to develop

Contacted Nathan about building LinkMeUp website

Worked on exporting iPhone video with same dimensions as source video

* Exporting with H.264 format and Match source - high bitrate preset produced video of original size (752 x 1334)
* Exported small sample (Frame Test 1.mp4) to test

Researched and produced “Call to Action” screen

* Watched Mailbox and Music Messenger video endings
* Produced still frame in Photoshop
* Added still frame to end of video
  + Contacted ShockFamily about moving icon up in video
  + Exported Call to Action Test 1 and Test 2 and full Video 5

Speed up video in ending to match audio intensity

* Exported Ending Test 1 – 5
  + Edited out long action pauses and button presses
  + Crossfaded text message clips for smooth transition
* Produced Video 6

**Week 6**

Sunday 6/28

Searched for and added two web developer candidates to clipboard on LinkedIn

Uploaded and embedded app video

* Uploaded to Wisita and Vimeo
  + Looked into HD video setting on Vimeo
  + Read about Vimeo Plus
* Added Vimeo embed code to site

Researched app marketing and how to pitch to journalists/app reviewers

* Read article “25 Creative Ways to Promote Your App For Free”
* Learned about promo codes and beta testing
  + Can (should) provide journalists with promo codes to app
    - Before release, but after app is in “Ready for Sale” or “Pending Developer Release” state
  + External beta testers can be invited after Beta App Review
* Started document “Marketing Brainstorm”
  + Listed components of a successful pitch
* Found contact URLs for news and app review sites
  + TechCrunch, Mashable, Gizmodo, Wired, Verge
  + 148apps, Cnet Download, AppStoreApps, iDownloadBlog
* Tried to learn about how Snapchat was marketed

Submitted LinkMeUp for Beta App Review

* Sent invites to family members

Tried to change production app Parse email to samvitj@linkmeupmessenger.com

Looked for replacement for Waves

* Created Pandora station for Waves
* Contacted Sohum

Changed title/subtitle font on app website

Wrote email pitch

* App functionality description and distinguishing qualities
* Promotional materials (screenshots, video, website), promo codes, and launch info
* Short personal bio and contact details

Created Dropbox account for LinkMeUp to use to share screenshots

* Uploaded iPhone 6 screenshots with frames
* Tried to find short Dropbox link
* Tested link, by opening on computer without Dropbox installed

Found and read about appshout! marketing service

Imported Android repository

* Read about git submodules, pull requests, git pull/fetch, and pushing to remotes
* Used git clone https://github.com/SamvitJ/LinkMeUp-Android.git to create/import Android repository on local machine
* Changed Parse keys in res/values/strings.xml to LinkMeUp-dev keys
  + Need to open pull request to incorporate changes in remote

Discussed work to be done in Android

* Explored and listed necessary improvements to Send Link tab

Researched promotional materials

* Read about how to write effective Press Release
  + Read iPhone app news stories on TechCrunch
* Added Media/Press Kit components to “Marketing Brainstorm”

Monday 6/29

Skype call with Sean

* Discussed current state of Send Link tab in Android app and work to do

Looked into uploading high quality video

* Read Vimeo article on optimal Adobe Premiere Pro export settings

Call to action screen

* Sent IconShock png file with guidelines for desired icon position

TestFlight invites and testing

* Sent email invites via iTunes Connect
* Tested app on Ananya’s phone
  + Resolved push notification issue by resetting numberPushRequests in Parse

Helped Sean with pull requests

* Learned that pull request source and destination branches must be different
  + Could not create pull request from local master to remote master
* Explained difference between adding/committing in short Skype call
* Taught Sean how to create/checkout a develop branch via git checkout –b <branch-name>

Meeting with PreApps

Started writing Press Release

* Read app press releases on TechCrunch to get sense for writing style and contents
* Wrote headline and introduction
* Described differentiating features (2 paragraphs) and link messaging (1 paragraph)

Helped Sean with git

* Recommended that Sean install Cygwin and use CLI for git
* Guided Sean in individually adding and committing files to develop branch via git add <file-name> | git commit –m

Tested Sean’s changes and read about merging pull requests

* Used git fetch origin | git branch -r | git checkout -b sean-dev origin/sean-dev to download Sean’s changes and build his changes
* Read about Centralized Workflow and Feature Branch Workflow
  + Can merge remote branch via git pull origin <branch>
* Learned that git pull is an shortcut for git fetch | git merge FETCH\_HEAD
  + To merge remote branch, can equivalently run git fetch origin | git merge origin/<branch>

Searched for audio track for app video

* Jack White, Santana, and YouTube default music (basspartout, audio library)
  + Tested some default tracks by playing along with muted app video
* Contacted Zach Kendrick to ask for recommendations
* Asked several friends if familiar with Waves | Mr. Probz
* Watched Wisita video on choosing good background music for videos
  + Discovered Marmoset
* Browsed Marmoset for inspirational/exciting, pop/rock instrumentals

Tuesday 6/30

Purchased “design service” (moving icon up on Call to Action screen) on PayPal

Discussed work to do with Sean and sent Test Flight invite

Finished writing Press Release

* Finished paragraph on link messaging and wrote paragraph on existing user bases
  + Researched YouTube and smartphone usage statistics
* Wrote closing section on app launch schedule
* Added footnotes to cite external sources

Merged Sean’s (sean-dev branch) pull request

* Researched how to create a second branch with a pending pull request
  + Branching off existing branch versus off master and then rebasing
* Researched commands for pulling in merge commit

Trimmed app video

* In one audio track, trimmed beginning of song
* In another audio track, cut out one iteration of riff from 20 second mark

Searched Marmoset for alternate audio track for app video

Uploaded remainder of press kit to Dropbox

* Press Release, App Store Description, Icon files, and Video

Got picture from Ananya for team bio section

Worked on new Call to Action screen

* Got .ai file of correct dimensions from IconShock
* Designed app store link screen
  + Tried to install GIMP
  + Replaced “LinkMeUp” with “www.appstore.com/linkmeup”
* Got screen without badge

Researched people/news agencies to contact

* Found Gigaom, Editor in Chief of The Next Web, and UK contact point for Wired
* Used LinkedIn to find contact info of tech journalists at major agencies

Emailed Epipheo with budget/time frame estimate and description of desired video

Researched marketing strategies

* How to market to teenagers
* App Store Optimization (ASO) and Search Engine Optimization (SEO)
  + Changed app name to include “Video & Music Messenger”
  + Changed some app keywords
* Read about advertising on YouTube, Spotify, and Pandora
  + Contacted Spotify and Pandora advertising

Reexported app video at ideal settings for Vimeo (Video 7)

Refined Press Release

Rewatched, edited, and exported video

* Reverted to long introduction with full audio track
* Adjusted ending fade times
* Exported video (Video 8)

Wednesday 7/1

Emailed Sean to set Bellevue meeting place and confirm time

Uploaded final video to Vimeo

* Researched tips for high quality video playback on Vimeo
* Upgraded to Vimeo Pro to allow high quality embed
* Uploaded latest app video
* Set video basic/privacy/embed settings and thumbnail, after some experimentation
  + Tried to take screenshot in QuickTime for higher resolution thumbnail
* Embedded HD video in Weebly
* Set LinkMeUp account profile pic
* Deleted old video

Helped Sean with Parse log in view and discussed conversation fragment in Skype video call

Research contact info of prominent tech columnists

* Farhad Manjoo (New York Times), Nilay Patel (Verge), Joanna Stern (Wall Street Journal), Edward Baig (USA Today), Brian Chen (New York Times)
* Geoffrey Fowler (Wall Street Journal), John Herrman (BuzzFeed), Dave Lee (BBC News), Samuel Gibbs (Guardian), and Damon Beres (Huffington Post)

Updated privacy policy on LinkMeUp website

Committed and pushed changes to develop branch

* Removed Ananya’s picture (accidently commited/pushed) via git rm --cached “Documents/Promotional/Team” | git commit --amend -m

Researched how best to contact journalists and how to provide promo codes

Prepared to email journalists after App Store approval

* Generated promo codes and downloaded app from promo code link on my phone
* Looked into App Store short link
  + App Store name changed, so www.appstore.com/linkmeup no longer valid
* Removed version 1.8 from App Store
  + Removed App Store badge from website
* Refined Press Release
  + Added date, publication location, website link, and app screenshots
  + Removed footnotes
* Modified email pitch
  + Made app description more memorable/fluent, and added lead up line
* Started document “Personalized Openings”

Researched John Herrman

* Looked through BuzzFeed article headlines and Twitter posts
* Did not find many articles about mobile apps or music/video

Researched and wrote email to Geoffrey Fowler

* Read his recent article on music industry evolution
* Wrote personalized opening and further modified email pitch
  + Eliminated line about convenience and bypassing URLs
  + Moved short bio to beginning of email
* Added email address to Press Release
  + Created group/email contact@linkmeupmessenger.com in Google Apps
* Tested all links and another promo code on Ananya’s phone
* Sent email

Started writing personalized opening for email to John Herrman

Readded version 1.8 to App Store

Thursday 7/2

Removed version 1.8 from App Store again

Readded footnotes to Press Release

Wrote Team Bios document

* Titles, contributions, and humorous anecdotes for Samvit, Ananya, and Sanjay
* Got picture from Sean
* Renamed “Team Bios” to “Team Bios (Website)” and created new document for press kit
  + Titles and contributions for Samvit, Ananya, Sean, and Sanjay
* Uploaded to Dropbox

Wrote personalized openings for and emailed Farhad Manjoo and Damon Beres

Modified email for app review sites

* Created “Email Template -– Review” and “Email Template - News”
* Emailed 148apps

Looked into LinkMeUp-Android code

* Talked to Sean about work to do
* Pull changes to local repository
* Looked at recent diffs to understand changes

Researched FbStart program

Looked into more app review sites

* Emailed AppStoreApps
* Found AppAdvice in Google Doc of app review sites from appbattleground

Edited Press Release

* Added ### symbols to mark end of press release content
* Change email address to contact AT linkmeupmessenger.com

Emailed AppAdvice

Researched and emailed Edward Baig (USA Today)

Found contact info for, researched, and emailed journalists

* Owen Williams (The Next Web)
* Christina Warren (Mashable)

Found contact info for but did not finish researching

* Dan Seifert (The Verge)

Friday 7/3

Refined email pitch for app review sites

Found app review sites in Google Doc from appbattleground

* Looked for sites with high alexa rank
* Found contact info for and emailed Mac Life, PCMag, Top Ten Reviews (via contact form), and MacWorld

Researched and started building Facebook ad

* Found correct ad type - mobile ad for app installs
* Adjusted target platform, interests, and demographic to narrow audience
* Wrote and refined tagline for ad
* Experimented with Stock images provided by Facebook
* Updated app information on Facebook Developers page

Opened bank account for LinkMeUp with Wells Fargo

Modified Team Bios page, adding app’s backstory to Samvit’s description

Looked for stock photos for Facebook ad via Google image search

* Found music sharing picture for which license has to be purchased

Looked into YouTube video ad

* Uploaded app video to YouTube

Rewrote email pitch to journalists from scratch

* Researched and composed email to Dan Seifert (The Verge)
* Researched and composed email to Dave Lee (BBC)
* Found contact info for, researched, and composed email to Christina Bonnington (Wired)

Committed and pushed changes to develop

* Added Press Codes folder and jpg images in Team Bios folder to “Other sensitive data” section in .gitignore

Found contact info for, researched, and composed email to more journalists

* Mario Aguilar (Gizmodo)
* Sara Perez (TechCrunch)

Copied new email pitches to Email Template - News and Personalized Openings

Researched Gigaom writers Kif Leswing and Erica Ogg

* Learned that Gigaom shut down in March, so scrapped emails

Saturday 7/4

Edited Press Release, removing line about LinkMeUp’s “big advantage”

Listed news sites to contact in “Marketing Brainstorm”

* Consulted “The Most Viral News Sources on Twitter and Facebook” Infographic

Found contact info for, researched, and composed emails to two more tech journalists

* Stuart Dredge (Guardian)
* Edgar Alvarez (Engadget)

Edited email pitch to tech journalists

* Revised for fluency, clarified reference to Dropbox link, and emphasized existence of Press Release
* Read through all emails to ensure accuracy

Found contact info for, researched, and composed emails to journalists at general news sources

* Alyssa Newcomb (ABC)
* Brain Mastroianni (Fox News)
* Modified email pitch for non-tech news sites
* Steven Tweedie (Business Insider)
* Hayley Tsukayama (Washington Post)
* Tried to contact info for New Jersey-based journalist Kate Rodgers (CNBC)
* Arjun Kharpal (CNBC)

Experimented with displaying screenshots on Weebly site

* Tried inserting slideshow and gallery elements

Built Android project in Eclipse

* Used .jar files instead of rebuilding some dependencies locally
* Imported API 19 via SDK manager
* Ran app on Samsung device

Researched marketing strategies and looked into other sources to contact

* Read Apptamin’s “Ultimate iPhone App Marketing Strategy Guide”
* Added Cnet and iMore
* Used Alexa rankings to determine reach of news sites
  + Kept Lifehacker and Slate, but eliminated ReadWrite

**Week 7**

Sunday 7/5

Committed and pushed changes to develop

Brainstormed new headline for Press Release

* Shorter and more eye-catching, with focus on benefit to users (“got a lot easier”) rather than product (“new iPhone app LinkMeUp”)
* Specific use case example (sending Gangnam Style/overplayed music videos/pet videos) rather than general functionality (sending YouTube videos)

Created single panel image containing all 5 screenshots

* Came up with new captions for Search and Inbox screenshots

Changed opening paragraph of Press Release

* Changed first line to comment about convenience of smartphones, instead of rephrasing headline
* Changed opening of second line (“Enter LinkMeUp…”) for smooth transition

Researched how best to display App Screenshots image on Dropbox

* Dropbox preview of png image small and not impressive
* Uploaded jpg and pdf versions to compare
* Tried to add photo file (screenshots.jpg) to Press Kit folder
  + Could not import photo into folder of files

Found contact info for, researched, and composed emails to journalists

* Tiffany Kim (BuzzFeed)
* Edited press release
  + Instead of merely stating that sending links on phones is inconvenient, used a common flow of events to illustrate problem
* Alexandra Ma (Huffington Post)
* Thorin Klosowski (LifeHacker)
* Will Oremus (Slate)

Proofread and sent 15 emails

* Corrected mistakes in promo codes links to Business Insider and CNBC

Sent apology email to Alexandra Ma (Huffington Post) for misprinting name

Sent emails to Thorin Klosowski (LifeHacker) and Will Oremus (Slate)

Added zipped version of Press Kit to Dropbox folder

Monday 7/6

Apologized to Tech Crunch journalist

Talked to Sean via Skype call about address book integration

Researched email forms and landing pages

* Found landing page builder services KickoffLabs and Launchrock
* Experimented with “Background Slides – Countdown” template on KickoffLabs
  + Tried different backgrounds and text fonts
* Experimented with “Launchrock Clean” template on Launchrock
  + Found it difficult to customize page contents (i.e. remove logo, add video)

Built landing page with KickoffLabs

* Used “Your App Here” template
* Added Inbox screenshot to phone and embedded video element beneath sign up form
* Replaced screenshot with Vimeo video in phone template
  + Upgraded to Premium account to edit html
  + Changed first slideshow element from <img…> to <iframe…></iframe>
  + Removed full screen option in Vimeo embed settings
  + Tried to embed higher quality video / experimented with slideshow of images
* Customized default text
  + Changed text of thank you message presented after sign up
  + Changed From Name/Address in email settings
  + Customized message body of Automatic Reply email
* Changed www entry (type CNAME) in Weebly host records to point to Kickofflabs page
  + First changed to proxy.kickofflabs.com – did not work
  + Tried deleting A records
    - Checked DNS settings in namecheap domain samvitjain.com
    - Learned that A records must point to IP address, so restored them
  + Changed URL to linkmeup.kickoffpages.com – did not work

Discussed work done and next steps with Sean

Refined landing page

* Successfully move landing page to linkmeupmessenger.com
  + Configured page settings in KickoffLabs to publish to linkmeupmessenger.com
* Added Facebook share images, Twitter share text, and favicon image
* Tried to fix sign up form box formatting for laptop screens
  + Changed box color to white
  + Moved subtitle to app name/logo textbox
  + Tried to eliminate textarea field from signup form
    - Deleted references in CSS to textarea
    - Experimented with height of textarea in CSS (0, 1, 5, 10 px)
    - Commented out all references to textarea in CSS and HTML
    - Tried to change value of signup form’s margin-top
* Added field to sign up form
  + Select option dropdown for type of phone
* Tested on different browsers
  + Dropdown placeholder text truncated on Firefox
  + Did not test on Internet Explorer (largest market share)

Researched and configured email marketing service provider

* Read article comparing MailChimp with AWeber
  + Decided to use AWeber’s free trial, since only sending one email
* Set up 30-day free trial account with AWeber
  + Linked KickoffLabs campaign to AWeber
* Set AWeber opt-in email setting to off and KickoffLabs to on
  + Still receiving emails from both services on sign up
  + Read on AWeber help pages that subscriber info transmitted to AWeber via API results in confirmation email, regardless of account setting
  + Sent test email from AWeber notifying subscribers of app launch
  + Unlinked accounts
  + Changed text of confirmation email

Tuesday 7/7

Tested webpage on Internet Explorer

* Got screenshots from Sanjay (Windows VM) and Sean (PC user)
* Dropdown form text truncated

Contacted KickoffLabs support with IE / Firefox screenshots

Added social icons to webpage footer (Facebook, Twitter, LinkedIn) and set privacy page text

Looked into high-resolution cover photo for Facebook

Researched how to grant read-only access to Parse database for Sean

* Feature not supported by Parse

Brainstormed and researched other ways to do pre-launch marketing

* Ideas: local newspapers, Reddit / HackerNews, write back to journalists to review app, Facebook ad
* Read about doing market research (to validate/refine idea) and early marketing
  + Paid app for virtual pets, Hatch, announced 1 year ahead of release date
* Read article in Smashing Magazine by Jeremy Olson on marketing and launch

Received response from KickoffLabs support

* Dropdown text no longer truncated
* Request assistance with text wrapping and badge position

Updated Facebook cover photo with large image containing unscaled, original screenshots

Updated landing page to reflect new plan

* Eliminated “I have an iPhone” option
  + Dropdown text truncated once again on IE and Firefox
* Updated copy text to reflect availability
* Added “Available on the App Store” badge via html <img…> element
* Decided to replace badge with App Store short link
* Experimented with text positioning

Set custom Facebook and Twitter share text and meta description for webpage

Webpage fixed again by KickoffLabs support

* Tested on Firefox and mobile browser

Tried to replace text wrap behavior with horizontal scroll bar

* Tried setting properties of .logo h1 and textarea elements
  + overflow-x to scroll and auto
  + display to inline-block
  + white-space to nowrap
* Contacted KickoffLabs support again
  + Learned that scroll behavior not desirable on mobile, so decided not to purse

Researched and started developing Facebook ads

* “Clicks to Webpage” ad
* “App Installs” ad
  + Used Advanced Combinations setting to narrow target audience to friends of people connected to LinkMeUp app or page (16,000 people)
  + Experimented with stock photos
  + Tried to find iPhone PSD template to display screenshots in ad

Wednesday 7/8

Created and purchased Facebook ads

* Looked for stock photos of people using phones in a café via Google Image Search
  + Could not find a good photo to superimpose image of phone on
* Designed ad with orange background and three app screenshots
* Decided on 4 stock photos to use
* Created two ad campaigns and three ad sets
  + Website Clicks – General
  + App Installs – General
  + App Installs – Connections
* Purchased ads via LinkMeUp debit card
* Previewed ads on iPhone

Released LinkMeUp to the App Store

* Changed app Pricing settings to be available in all App Store territories worldwide

Contacted KickoffLabs about email caching issue

Downloaded and tested app

* Created new accounts via normal sign up and Facebook log in
  + Created new Facebook account Sam Jain (samvitj@linkmeupmessenger.com)
* Tested accepting/denying permissions and forwarding links

Tested webpage signup form and Facebook/Twitter post links

Wrote Facebook posts

* Posts for Personal Facebook page and for Princeton Class of 2016, 2017, and 2018 pages
* Tested on Only Me setting to ensure that website link was visible, where relevant

Contacted 29 people (25 colleges) on Facebook

* Requested friends to post about the app on their college Facebook groups

Thursday 7/9

Created 5 backdated posts on LinkMeUp’s Facebook page

* Posted YouTube videos featured in app video and screenshots

Updated Facebook share image to three-phone screenshot

* Used Open Graph Object Debugger to update cache

Posted about LinkMeUp in Princeton Facebook groups, on my timeline, and on app’s page

Looked into Android code

* Pulled changes from GitHub
  + Unstaged changes on local machine (marked as M on git checkout)
* Could not build project without phone

Exported Parse data for Sean

* Sent JSON file containing data for new account he made

Monitored LinkMeUp data

* Video views, ad conversions, website traffic, leads

Followed up about posting on Facebook groups with 5 friends

Set up A/B test on landing badge

* Copied page and added badge (via html)
* Ran test Badge vs. No Badge to compare conversion rate

Researched how to write and started writing follow up email to journalist

* Started working on short backstory to app development

Read article on “Inside Story of Yik Yak” to come up with marketing ideas

Assigned issue to Sean (logout functionality) and discussed work to do on Skype

Stopped A/B test

* Removed page without badge from base URL, despite lack of conclusive results

Committed and pushed changes to develop branch

* Used git commit --amend --no-edit to rename two committed images without modifying commit message

Emailed KickoffLabs about access to more detailed conversion data

Friday 7/10

Modified App Install ad sets

* Changed text from “A quick, fun way…” to “The fastest way…”
* Changed call to action from “Install Now” to “Learn More”

Worked with Sean to debug crash in Send Link tab

* Built and ran code in SeanContactbookIntegration branch
* Sent crash logs from Send Link tab to Sean
* Discussed issue on Skype

Found and shared new YouTube music video on Facebook group

Added to description of “Signup flow” issue on GitHub

* Specified major cases and steps involved in creating new account

Changed App Store links on landing page to full iTunes URL

* Replaced Twitter short link, which was not working on mobile

Configured Facebook conversion pixel

* Created pixel with Facebook ad manager
* Added pixel code to landing page header
* Installed “FB Pixel Helper” Chrome extension to verify pixel implementation
* Tried to resolve “Please check that a valid and non-empty object id is passed in” error message in Facebook ad manager
  + Moved standard event function call (fbq('track', 'Lead');) to within general pixel code (<script> … </noscript>)
  + Cleared Chrome cookies and refreshed Facebook page

Tested App Store build

* Tested account creation with Facebook login on iPhone 6
  + “Login with Facebook” had to be pressed twice
  + Did not show address book permissions system alert, despite phone reset
    - If app exited and address book access granted manually, app relaunches
    - Bug discovered: email/username not set in new account and no prepackaged links included (relevant code bypassed by exit/relaunch)

Looked into app crash logs

* Used Xcode organizer to find statistic on 2 identical crashes of v2.0 on iPhone 6
* Found line of crash (CFRelease(…)) in last commit on master branch
* Reverted to develop branch and made changes
  + Check if null before releasing

Read about gitflow

* Hotfixes should be made on branches off of master, not develop

Understood exemption from withholding condition on W4 tax form

Met with Sean at Bellevue Starbucks

* Ran latest version of Sean’s code on S4 mini
  + No crash while selecting friends in Send Link tab
* Discussed next steps in address book / friend suggestions and signup flow

Saturday 7/11

Switched off Facebook ads

Researched how to advertise mobile app to teenagers

* Read about frequency of YouTube usage (55% of teens use daily)
* Read about Tumblr

Developed new screenshots for version 2.05

* Matched background to logo (orange gradient)
* Decided on Calibri font for captions over Gill Sans, Copperplate, Helvetica, Cambria
* Uploaded iPhone 6 screenshots to iTunes Connect

Posted about LinkMeUp on Skyline Class of 2016 Facebook group

Posted about app launch to LinkMeUp’s Twitter

Tried to emphasize presence of playable video on website

* Noted that of ~500 video loads, only ~85 plays recorded
* Experimented with new copy text (“Watch out video…” instead of “Download…”)
* Tried to display video title via Vimeo embed settings

Implemented address book bug fix via gitflow

* Read about merging versus rebasing
* Committed and pushed changes (new iPhone 6 screenshots) to develop
* Created new branch hotfix-2.05 off of master
* Implemented CFRelease null checks
* Tested change on iOS 8.4
  + Updated to Xcode 6.4
  + Could not find null instances of CFStringRef and ABMultiValueRef types
* Committed changes to hotfix-2.05 (mistake)
  + Reset mistaken commit with git reset –soft HEAD^
* Made version bump commit
  + Changed version to 2.05 and bundle identifier to com.JainDev.LinkMeUp
* Committed address book bug fix again
* Amended previous commit to develop branch to remove extra line in Data.m’s -saveAddressBookContacts and prevent potential merge conflict)

Researched marketing

* Read Quora posts on how to get first 10,000 users
  + Learned that app needs to appeal to closed circles (to create mini-network effect)
* Looked into packaged marketing services
  + Learned about Appular and EAM on iPhoneDevSDK blog post
  + Contacted appshout! and Appular via contact forms
* Read TechCrunch article on Facebook’s attempt to host music videos

Developed new screenshots for other devices

* Uploaded screenshots for iPhone 5 and iPhone 6 Plus to iTunes Connect
* Decided to use Select (Add Message) as first screenshot on iPhone 4
  + Changed caption to “Send any YouTube video”
* Uploaded iPhone 4 screenshots
* Committed and pushed changes to develop

Looked into verification text message delivery via Twilio and Cloud Code for Android

* Updated Twilio username, email, and password
* Translated Objective-C code for calling JS “inviteWithTwilio” function into Java
* Posted comment to Signup flow issue

Looked into resolving remaining bugs in production app

* Read/thought about posting NSLog messages to server
* Code for posting mobile verification status to Parse added to hotfix-2.05
  + Hotfix-2.05 merged into master and develop via git merge --no-ff hotfix-2.05
  + Pushed develop and master to origin
  + Researched whether hotfix branch should be pushed to origin as well
* Looked into Facebook login loophole bug
  + Realized that username/email should be set after initial log in, not verification
  + Researched how to request user info without async call to Facebook API
  + Tested Facebook account creation flow
    - Terminating app before pressing continue in findContactsVC and relaunching the app causes PFUser isNew to switch to false

**Week 8**

Sunday 7/12

Brainstormed work to do

Resolved bug in signup flow logic

* Moved code from -viewDidAppear to -didLogInUser in DefaultSettingsVC
  + Pulling username, email, and name from Facebook
  + Checking if account with same email already exists
    - Introduced NSUserDefault status boolean didCreateAccountWithSameEmail
* Introduced NSUserDefault status boolean didNotLaunchNewAccount to track if app terminated before launch (but after mobile verification)
  + If didNotLaunch is true, launch application as if new user

Fixed new crash seen after logout when push notifications switched off

* Resolved by checking if any user logged in before updating data in LinkMeUpAppDelegate’s –reloadData method

Tested different signup flows

* Creating new account via Facebook if account with email and/or username exists already
* Completing launch of new account created via Facebook
* Completing launch of new account created via LinkMeUp signup screen
* Terminating app before pressing continue in findContactsVC

Committed and pushed changes to develop

Created release-2.05 branch, changed bundle identifier, and made bump commit

Used git mv blackiphone6 BlackiPhone6 to rename file in develop (committed change)

Merged release-2.05 branch into master (--no-ff tentative Archive commit)

Exporting archive

* Initially failed in master branch
* Moved back to release branch, changed Code Signing Identity - Release to iOS Distribution (commited change), and tried again – still failed
* Looked into provisioning profiles and expiration procedures
* Untethered iPhone to successful export archive
* Merged release-2.05 into master again (--no-ff Archive commit)

Pushed changes to master

Uploaded archive to iTunes Connect

* Build number 2.05 changed to 2.5 in iTunes Connect
* Looked into app version and build number conventions
* Tried changing building number to 2.0.5
  + Archive successfully created, validated, and exported
  + Would not upload to iTunes Connect

Researched app name guidelines and recommendations

Discussed Android work to do and 3-week plan

Wrote email to appshout!

Monday 7/13

Undid last commit in develop (file rename) via git reset --soft HEAD^

* --force pushed change to origin

Managed Android development

* Wrote email to Sean on Android 3-week plan
* Created Asana account
* Discussed launch date and work to be done in Send Link tab with Sean

Researched app name, keywords, and age rating best practices

* Looked into App Store analytics tool AppTweak

Submitted Version 2.05 for review

* Tagged Version 2.05 / Build 2.5 commit in master

Looked into app marketing services

* Contacted EAM via contact form
* Read about appshout! on iPhoneDevSDK forum, Quora, LinkedIn, Twitter, Facebook
* Looked into other services
  + ApproStar, App Promo (contacted), and Fetch
* Wrote follow-up email to appshout! asking about upgrade policy

Wrote follow-up email to journalists (to be sent after Version 2.05 update in App Store)

Brainstormed marketing ideas

* Inspirational speech at middle school (i.e. RMS) assemblies
* Redmond Town Center / Bellevue Square stall
* Contact / advertise through popular YouTube channels

Found and resolved incorrect references to App Store page

* Replaced link to Turkish version with link to U.S. version with redirect
  + Updated website, tweet, and press release
* Tested Twitter short link
  + Links to US page with no redirect
* Bookmarked three known versions of page

Looked into YouTube stars

* Read about PewDiePew
* Tried to found famous channels based in Seattle

Looked into push notification screen bug

* On iPhone 6 and vishakha.an@gmail.com account, push notification screen rapidly dismissed on launch
* Isolated issue to app’s failure to clear NSUserDefault kDidPresentPushNotifAlertView
  + Dealloc not being called in pushNotifViewController

Confirmed functionality of version 2.05 via Test Flight

* Sent invites to Allie, Ishan, Nathan, Nicholas, Rachid, Siddharth
* Confirmed by Allie and Ishan

Looked into Bellevue Square website and contact information

* Found email of Bellevue Collection (info@kemperdc.com)

Tuesday 7/14

Contacted Ashima about testing app for international numbers

Worked on marketing

* Looked for YouTube channels / stars based in Seattle
* Went through Wikipedia list of famous people from Seattle, Redmond, Issaquah
  + Found Karan Brar of Diary of a Wimpy Kid / Jessie fame
* Tried to find Karan Brar’s email address
  + Looked through Facebook, Twitter, Instagram, and Google Plus pages

Released Version 2.05 to App Store after approval

Tested new App Store version

* Contacted Othman, Siddhartha, and Zach to download new version
* Confirmed by Othman

Email to current LinkMeUp users

* Asked to update to Version 2.05 and like / follow public pages
* Manually imported 87 emails from Parse
* Tried to import contacts into new group in Google Contacts
  + Tried uploading .json and .csv file types

Sent email to Fetch

Researched Princeton alums in music / entertainment industry to contact

* Found Ellie Kember (from qThe Office), Molly Ephraim on Wikipedia

Contacted 31 friends on Facebook to ask if they own an iPhone, and if so, to download app

Finalized follow up email to journalists

Updated press kit

* Revised second paragraph of press release
* Replaced old screenshots with new orange background ones
* Updated App Store description

Wednesday 7/15

Finalized press kit

* Added folder of individual screenshots and moved panel image into folder

Researched best practices for a pitch email to journalists

* Looked into recommendations on compelling subject lines

Sent follow up email to 23 journalists

Read about and made accounts on Product Hunt (Samvit’s Twitter) and HackerNews (SamvitJ)

* Asked Shubhro for Product Hunt invite
* Learned best practices for posting on HackerNews
  + Post between 8AM – 10AM EST on weekday
  + Send link to news.ycombinator.com/newest (NOT direct link) to 20+ people
  + Later send news.ycombinator.com/new to 10+ people
  + Choose compelling title

Looked into contacting singers / actresses from Princeton

* Researched Baiyu (Sara Chen), Ellie Kemper, and Molly Ephraim
* Composed, revised, and sent email to Baiyu

Built latest Android commit, ran app, and sent debug log to Sean

Read about promoting app on Reddit and Product Hunt

* Tried to login to old Reddit account
  + No email address on record, so could not reset password
* Looked into best time to post on Product Hunt
* Read about Darshan’s apps Plan and Lo on Product Hunt

Thursday 7/16

Made new Reddit account (SamvitJain / samvit.jain@gmail.com)

Researched and replied to Appular and App Promo

* Read App Promo’s slide deck and created documents of questions to ask

Restarted Facebook ads

* Changed App Installs - Connections from oCPM to a CPI bid of $1 per install
* Researched CPM vs. CPC vs. CPI best practices
* Created new App Installs ad set
  + Seattle / Redmond area, Females, Ages 13 – 19, YouTube
  + CPI bid of $1 / install
* Changed both CPI bids to $2 / install
* Researched market price of app installs

Sent Sean images and code for friend request buttons

Researched employment forms and tax policies

* Dependent can show $6,300 in earned income (2015) without paying federal income tax
* Summer interns must file W4 form

Deleted five fake accounts and their associated master links from Parse

Looked into other advertising platforms

* Researched YouTube video ads

Met with Sean at Bellevue Panera

* Discussed work to do
  + Friend requests, data updates / performance, screen sizes support
* Installed LinkMeUp with Parse development keys on Sean’s phone
  + Temporarily changed Build Active Architecture Only setting to No
  + Created new provisioning profile

Friday 7/17

Researched number of ratings required to display average rating on App Store – 5

Looked into PSD templates for screenshots with captions

* Started watching video by Michael Flarup of pixelresort
* Experimented with his templates (http://appicontemplate.com/iphonescreenshot)

Sent Friend Request code Gist to Sean

Typed up Ananya’s app reviews and added 3 more to document

Brainstormed marketing ideas

* Looked into July events in the Lake Washington School District calendar

Got Product Hunt invite from Darshan

Started new Facebook ad with CPC pricing

* Created ad set – Redmond area, Females, Ages 13 – 18, YouTube – and set max CPC bid of $0.42 / click (within suggested range)
* Read about CPC bidding on Facebook
* Changed bid price to $0.50 / click

Looked into Facebook App Installs tracking

* Added line of code [FBSDKAppEvents activateApp] to AppDelegate’s didFinishLaunchingWithOptions:
  + Not required, since Facebook login already configured via Parse, so removed
* Found Facebook Analytics dashboard for LinkMeUp
  + Looked into statistics for organic and paid installs driven by Facebook

Finished watching Michael Flarup’s video on PSD templates

Sent Gist with friend request button formatting code to Sean

Saturday 7/18

Researched Galaxy S6 market share

Researched how to get 100,000 downloads

* Read Quora answers
* Read article on promotional / marketing strategies by Buzinga apps
  + Learned to identify key traffic sources (via services such as SimilarWeb)
  + Learned to create Excel spreadsheet with list of media / reviewer contacts
  + Learned to use bullet points in pitch email to journalists

Created Contact Info spreadsheet on Excel

* Moved names and contact info for journalists, app review sites, and connections from Marketing Brainstorm to Contact Info
* Added columns Alexa Ranking, Date Contacted, Followed Up?, and Means of Contact

Added app ratings / reviews from 4 family Apple IDs and 2 more created by Ananya

Contacted new app review sites and followed up with old ones

* Looked through app review sites in list by Buzinga apps
  + Found two sites with decent Alexa rankings – AppShopper and Apps400
* Contacted Apps400 (online form), iMore, and AppShopper
* Sent follow up email to previously contacted review sites and to Forbes / PCWorld contributors

New screenshots for Version 2.10

* Researched screenshot guidelines, templates, and examples
  + Looked through bookmarked App Store pages to get idea for what looks good
* Used LaunchKit.io to make screenshots
  + Pale blue background and large captions in Raleway font
    - Exported Inbox screenshot in all sizes to test
  + Tried orange background with white text – did not look good
* Decided to modify original screenshots
  + Used larger font for captions and moved phones down
  + Changed font from Calibri to Avenir (Raleway lookalike available in GIMP)
  + Removed gradient, using a constant orange shade from icon instead
  + Downloaded and tested Raleway font
* Compared all screenshot options
  + Decided on 1) Avenir font and 2) background with no gradient
* Brainstormed one line captions for Inbox screenshot
  + Decided to go with two line caption “Browse through links sent by friends”
* Created iPhone 6 screenshots

Changed App Store link on website to US store with no redirect

* Tested on mobile – link still opened in App Store

Restarted Website Clicks campaign but limited reach to Redmond Area, 13-18 age group

Committed and pushed changes to develop

Modified screenshots, created iPhone 4 / 5 / 6P variants, and uploaded

* Used darker shade of orange to better match icon color in mobile App Store
  + Tested darker gradient, but decided to go with constant shade instead
* Created screenshots for iPhone 4, 5, and 6 Plus
* Uploaded all screenshot to iTunes Connect

Contacted Facebook friends to ask about HackerNews accounts

* Got three friends on board – Tim Lau, Joseph Zhong, and Rahul Dev.

Committed and pushed changes to develop

**Week 9**

Sunday 7/19

Finalized v2.10 and submitted for review

* Created release-2.10 branch and made bump commit
* Tested app on iPhone 4 and 6
* Returned to develop branch to modify iPhone 4 screenshots
  + Larger captions and more spacing between caption and phone (commit)
  + Merged changes into release-2.10
* Accidently merged develop into master (instead of release-2.10 into master)
  + Fixed with git reset --hard HEAD@{1}
* Merged release-2.10 into master
* Pushed develop and master to origin
* Submitted v2.10 (build 2.6) for review
* Tagged master commit

Researched Android devices and API support

Looked into online promotion strategies

* Brainstormed work to do
* Revisited Intro to Side Projects PowerPoint on Launch
  + Reviewed tips on how to post on HN, Reddit, and ProductHunt
  + Learned about tweeting at publications / influential people
* Read about adding SEO and Facebook meta tags to website
  + Changed FB meta description link to iTunes URL (instead of Twitter short link)
  + Updated app tag line to “fastest way to send \*YouTube\* videos”

Looked into analytics tools

* Facebook pixels
  + Tried to configure Custom Audience Pixel for tracking leads
    - Copied Pixel code into KickoffLabs analytics dashboard – later removed
    - Disabled ad blocker
    - Tried on another computer
    - Sent message to FB ads support team via contact form
  + Added Facebook Conversion Tracking pixel
    - Added code to site header
    - Confirmed functionality with FB Pixel Helper chrome extension and Tools -> Pixels in the Facebook Ads Manager dashboard
* Google Analytics
  + Created account and added Universal Analytics tracking code to site header
  + Set up some advanced features – Enhanced Link Attribution, Advertising Reporting (collection of demographic data on visitors), and User-ID tracking

Prepared for posting on HackerNews

* Read article The Best Time to Post on Hacker News (Nathanael Silverman)
  + Confirmed from multiple sources that post should be between 9 – 10 AM EST
* Contacted Facebook friends to ask about HackerNews accounts
  + Paul Cretu (tentative), Mike Zhang, and Chris Piller agreed to upvote
* Read about voting ring detection
  + Was able to upvote from SamvitJ and ajain20517
  + Confirmed that multiple computers with same internet modem share IP address
  + Learned that HN has measures in place to combat upvotes from new accounts

Modified Facebook ads

* Changed bid type for App Installs – Redmond, Female, Clicks to oCPC (instead of max bid of $0.50 / click) and budget to $5.00
* Changed bid for App Installs – Connections, M/F to FB’s suggestion of $2.54 / install

Posted Spectre teaser trailer to LinkMeUp Facebook page

Resolved issue with popping stashed changes in git branch

* Reset accidental changes to branch via git checkout <filename>

Made backups of important LinkMeUp materials

* Copied Xcode project folder and some documents folders to Seagate Slim Drive

Tested mobile verification with Indian phone number

* Tried number without country code
* Tried number with +<country code> appended to front (as suggested by Twilio)
  + Plus sign stripped by app before being transmitted to Twilio

Monday 7/20

Browsed App Analytics (iTunes Connect), FB Ads Manager, and Google Analytics stats

Boosted Spectre trailer post on Facebook page via $3.00, one-day ad campaign

Looked into Promoted Pins on Pinterest

* Read article How to Market Your App on Pinterest
* Created business account and profile for LinkMeUp
* Downloaded Pinterest’s “Pin It” Chrome Extension
* Created 2 boards and added 1 pin to each

Read article Key Ingredients To Make Your App Go Viral by Smashing Magazine

* Learned that app must have something valuable to share and reward users for sharing it
* Learned that friend invites should be a core component of the app
* Learned to offer limited-time promotions to create sense or urgency
* Takeaway – virality must be built into app’s design and core functionality from the start

Looked into posting on Reddit

* Identified possible threads to post in – r/programming, r/iOSprogramming, r/iOS, r/iPhone, r/apps, and r/iOSapps
* Decided to post in r/apps due to larger traffic than other, programming-specific threads

Looked into posting on Product Hunt

* Browsed posted products to get ideas on how to make post
  + Found social music app Cymbal
  + Added new cover photo to LinkMeUp’s Facebook page, modeled off of Cymbal’s
* Started document Product Hunt Post
  + Came up with one line product description
* Found 2 articles on Product Hunt posting best practices
  + Added key ideas learned to document
  + Takeaway – should understand Product Hunt well before making a post
* Found email address for site founder, Ryan Hoover (possible Influencer)

Added email icon to landing page footer

Started work on Facebook contest / giveaway

* Came up with gift idea and plan for advertising the contest
* Started document Contest Planning
  + Wrote Facebook post announcing contest
  + Listed components of contest and problems to consider
* Created / saved an audience for contest
  + Seattle / Redmond / Issaquah / Kirkland / Bellevue residents, ages 13 – 18, interested in YouTube, owners of iPhones

Tuesday 7/21

Increased CPI bids

* App Installs – Connections, M/F to $2.91 / install (suggested)
* App Installs – Seattle/Redmond, Female to $3.00 / install

Found and corrected mistake (incorrect caption) in iPhone 4 Inbox screenshot

Worked on online contest

* Found picture / thumbnail to accompany post
* Looked into other gift ideas
  + YouTube channel T-shirts
  + LinkMeUp custom T-shirts
* Added Call to Action button (“Use App”) on Facebook page
* Tested post on mobile
  + Goal: info about prize should be visible “above the fold” on mobile
  + Shortened first sentence so that it fit on 2 lines on mobile
* Improved thumbnail image
  + More prominent logo (darker) and larger text / App Store button
* Changed Contest Audience to only include Sammamish and Redmond at first
  + Changed wording of first line of post to reflect localization
  + Emailed KickoffLabs to request addition of “Based in Seattle, WA” to website
* Revised and tested first line of post
  + Giveaway vs. contest and fun contest vs. first contest
* Researched incentivized downloads

Added username to Password Reset email and website / FB page link to Verification email

Researched backend technologies

* Read post on MySQL vs. NoSQL by Quora founder

Continued testing and optimizing Facebook post

* Changed first line to be even more shorter and direct
* Removed “congratulations” to make post seem more genuine

Tried to extract all user addresses from exported Parse data (\_User.json)

* Installed python
  + Resolved SHA1 mismatch error in one tar file
* Researched how to parse JSON in python
  + Difference between json.loads() and json.load()
  + Accessing dictionary elements
    - Tried to resolve “TypeError: string indices must be integers”

Wednesday 7/22

Skype calls with Sean

* Discussed data update logic and work to do

Looked into international phone number verification issue

* Added instructional message to verificationVC xib file
* Changed keyboard type to UIKeyboardTypePhonePad
* Change code to no longer strip user input of punctuation
* Exported archive from develop branch and uploaded to iTunes Connect
  + Changed app status to Developer Rejected
  + Submitted new build (2.61) for review
* Requested expedited review
* Merged develop into release-2.10 and merged release-2.10 into master
  + Pushed changes to origin and master
* Contacted new international users about upcoming fix

Posted Online Contest description to Facebook page

* Boosted to Sammamish/Redmond residents for $3.27

Finished writing extractEmails.py

* Understood with \_ as \_ statement
* Resolved dictionary element KeyError
  + Replaced user[‘email’] with user.get(‘email’, None) to handle null value for email address
* Learned how to write to a .csv file
* Learned how to create and write to a new directory

Changed Facebook ads

* Changed App Installs – Connections, M/F, Installs to oCPC (instead of CPI)
* Turned off Website Clicks and App Installs – S/R, F, Installs

Skype call with Sean

* Discussed use of shared preferences to cache data

Brainstormed contest rules and selection procedure

* Created document contestDrawing.py
* Wrote pseudocode for selecting winners
* Started coding logic for listing links sent after contest start
  + Comparing ISO 8601 format dates

Moved app reviews to newly approved version (2.10)

Continued work on contestDrawing.py

* Finished link date comparison
  + Learned how to initialize datetime object
  + Learned how to make datetime offset-aware
* Sorted link array by createdAt dictionary field

Confirmed Version 2.10 functionality with Bela Todi

* Verification code successfully sent to Indian phone number with country code

Thursday 7/23

Discussed meeting location and paging links with Sean

Emailed international users about new version of LinkMeUp available in App Store

Emailed two contest participants, requesting them to tell friends about contest

Worked on contestDrawing.py

* Wrote code for computing contest candidates from sorted links list
  + Excluded LinkMeUp H.Q. and previously included link senders
* Wrote code for further pruning list of candidates
  + Used first 3 digits of phone number to determine if resident of Seattle Area
* Learned how to space and left align printed content via format string

Promoted new contest post to Greater Seattle Area audience

* Created Greater Seattle Area audience via Audiences dashboard
* Paused all other ads
* Researched difference between boosted vs. promoted posts
  + More audience customization possible with promoted post
* Researched (promoting) Facebook events
* Created promotion for Greater Seattle Area with $40 daily budget

Refined contestDrawing.py program

* Added white lists and black lists to logic for determining contest participants
  + Included eligible, Seattle-area users with 1) null mobile\_number field (from 1.x app versions) and 2) non-WA state area codes
  + Excluded family members, fake accounts, and users older than 18 (i.e. my friends)
* Looked into Parse REST API
  + Goal: get latest JSON data directly from Parse
  + Wrote two files getLinkData.py and getUserData.py for retrieving link and user data via Parse REST API request
  + Did not yet integrate API calls into main contestDrawing.py program

Committed and pushed changes (python programs) to develop

Looked into 2 international phone number verification failures (relatives of Bela Todi)

* Tried to test phone numbers with spaces
  + Not possible to enter spaces in provided keypad

Looked into advertising on Instagram

* Not yet available to most businesses

Met with Sean in Lakemont - Bellevue Starbucks

* Researched Android API versions and screen sizes for meeting

Paused Greater Seattle Area post promotion

Wrote email about contest to select group (ages 13-18, WA residence) of current app users

Looked into integration of REST API calls into contestDrawing.py program

* Considered piping input/output of python programs
* Moved logic from getLinkData.py into contestDrawing.py
  + Added limit and skip parameters to query
  + Looked into HTTP request paging

Friday 7/24

Created document Promoted Post Results to compare contest promotion campaigns

* Redmond/Sammamish campaign got clicks for ~9% of views vs. 0.7% of views for Greater Seattle Area campaign

Brainstormed contest promotion ideas

* Targeting cities – Redmond/Sammamish, Bellevue/Kirkland, City of Seattle
  + Created new post promotion campaign targeting Bellevue residents
* Sending emails to past contacts (elementary, middle, high school)
* Buying ads on other services with less competition and clutter
  + Twitter, Pinterest, Tumblr
* Posting on contest promotion websites
* Sending an email about the contest to RHS student mailing list

Incorporated REST API calls into contestDrawing.py program

* Refactored API calls to functions in getLinkData.py and getUserData.py
  + Linked files via import statements in contestDrawing.py
* Implemented paged REST calls
  + Used do-while loop construct

Replaced thumbnail image in contest post

* Bigger logo, text, and App Store badge
* Replaced app tag line with prize summary to increase click rate
* Created new campaign and started ad set with $24 daily budget

Looked into other contest promotion strategies

* Found service ExactData from which to buy mailing lists
* Wrote and sent message to RHS ASB Facebook page admin
  + Researched concept of tweeting *at* someone (replies vs. mentions)
* Wrote and sent Facebook message to Mr. Lombardi

Committed and pushed changes to develop branch

Tagged v2.10b (2.61 build) commit in master

Looked into rejected promoted post

* Read about and experimented with 20% text rule
* Created new promoted post with smaller logo and $25 daily budget

Changed sortedLinks time stamp to PST (instead of UTC) in contestDrawing.py

Edited Bellevue promoted post to include App Store link

* Changed ad setting to show only on iOS devices (reduced budget to $20 / day)

Saturday 7/25

Email KickoffLabs about lack of space between Notify Me button and footer on mobile website

Created new screenshots

* Analyzed problems with existing screenshots in mobile (iPhone 4/6) App Store
* Tried out new lighter backgrounds with gradient
  + Tested by superimposing on screenshots of LinkMeUp in mobile App Store
  + Decided on darker background to better match bottom of logo
* Uploaded new screenshots for iPhone 4, 5, 6 and 6 Plus to iTunes Connect

Tried to find old versions of App Store page for personal record

Brainstormed work to do

* Updated Progress Log.xlsx and Work to Do with to do list for remainder of summer

Read about steps involved in releasing app to Google Play Store

Researched how Google/Quora acquired first 1,000 users

* Watched beginning of interview with Uber founder Travis Kalanick
* Read Reddit post on how several successful companies acquired their early users

Ended promotion of contest post to Bellevue residents

Sent Facebook messages about app to Mr. Noteboom and Mr. Crowley

Looked into signup with Facebook issue (addressed in v2.05)

Submitted Version 2.15 for review

* Committed and pushed changes to develop
* Created release-2.15 branch, made first commit, and exported archive
* Uploaded archive to iTunes Connect
* Merged release-2.15 into master and pushed local master to origin
* Submitted new version for review

Read about how to exclude iPod/iPad from list of supported devices on App Store

Started work on posting log messages to Parse

* Created Logs class in Parse and in Xcode
* Wrote code for creating and closing log sessions
  + Created sessionLogs object in -didFinishLaunchingWithOptions
  + Updated sessionLogs in defaultSettingsVC and -didEnterBackground
  + Closed session in -willTerminate and on logout
  + Cleared and create new sessionLogs object on logout
* Tested implemented functionality

**Week 10**

Sunday 7/26

Used git stash apply stash@{1} to pop one of two stashed working directories

* Used git stash list to list stashes in develop and server\_logging

Worked on custom function for posting to Parse

* Introduced class / file pair NSLogExtension.h/.m and function -ExtendNSLog
* Added logic for appending log messages to messages field on sessionLogs
* Addressed “Object not found for update (Code 101)” Parse error
  + Set ACL to public write access on new session created after logout and new session created on application launch, if no user logged in
  + ACL changed to sole write access for current user on login
* Added \_\_TIME\_\_ parameter to custom function to display system time in log messages
  + Tried to print time in milliseconds

Looked into application lifecycle and logging to Parse before app termination

* Looked into when -applicationWillTerminate is called
* Read Apple Docs on App Life Cycle and background execution
* Experimented with function -beginBackgroundTaskWithExpirationHandler:

Revised design of Logs class

* Replaced sessionStart and sessionEnd (redundant with createdAt and updatedAt) with SessionEndCause typedef enum
* Replaced SessionEndCause with sessionLoginStatus
  + Changed logic to not create new sessionLogs object on logout
* Added fields versionInstalled and installation

Modularized server logging logic

* Created app delegate method –saveSessionLogsToParse and -saveUserInfoInSessionLogs method in defaultSettingsVC

Looked into account creation with Facebook issue

* Added case to handle “Invalid email” error and other failures to set username/email
  + Username set to email, but email set to nil
  + Logged error message if Parse error 125 (Invalid Email error) occurred

Tested server logging code in signup flow

* Added call to -saveUserInfoInSessionLogs in callback method -didSignUpUser
  + Removed call from -launchApplication: launchType:
  + Login status now set in Logs object immediately after successful account creation
* Tested edge cases
  + Added more log statements to verification flow

Monday 7/27

Worked on refining custom log function

* Eliminated incorrect use of \_\_TIME\_\_ macro from custom log function
* Looked into how to access and print system time, as displayed by default NSLog function
* Improvement formatting and alignment of custom log messages
  + Added left alignment flag and width field to format string
  + Added code to truncate file name to fixed size
* Wrote program logMessages.py to neatly print messages field on any Logs object
* Looked into redirection of NSLog messages from static libraries / frameworks
  + Read about how to manipulate file descriptors in iOS to redirect stderr to file
  + Tried to find .pch file or other setting in Parse SDK controlling logging behavior
  + Read Parse’s Changelog from versions V1.4.2 (linked) to V1.7.5 (current)

Added to code involving Installation objects to better track downloads and user device info

* Saved Installation to Parse in –applicationDidFinishLaunchingWithOptions
* Changed instances of –saveInBackground to –saveInBackgroundWithBlock
  + Other instances in Xcode project (i.e. in friendsVC) changed as well
* Added currentUser and allUsers (PFRelation) fields to map users to installations
  + Fields set in -launchApplication: launchType:

Read about MySQL vs. SQLite vs. PostgreSQL tradeoffs

Looked into NSString to C string conversion in –ExtendNSLog

* Researched alternatives to [str UTF8] method call to resolve apostrophe misprint error
  + Experimented with –[str cStringWithEncoding: UTF16]
  + Change caused build errors

Moved call to –ExtendNSLog from Debug mode (within ifdef DEBUG scope) to Release

* Changed scheme setting to Release and tested app
* Tested to see if last log messages transferred to server when
  + User kills app with by double clicking home and swiping up
  + User leaves app, uses other memory intensive apps, and system kills LinkMeUp
  + Messages not transferred, but unclear whether -applicationWillTerminate called (phone untethered to computer)

Tested account creation with Facebook issue error handling

* Tested invalid email logic – case correctly caught and logged
* Noted that session logs not always transferred to server on –didEnterBackground
* Tested nil email – no issue caused, as expected

Looked into logic for transferring session logs to server after any error message logged

* Tried searching for substring “Error” in log message argument (commented out)

Looked into editing Facebook permissions on account creation with Facebook

* Noted crash if email permission selectively denied
  + Resolved by setting username to be full name, instead of email, if email denied
  + Did not handle case if both name (public\_profile) and email denied
* Wrote code separating out existing username error (202) from existing email error (203)
  + Moved to separate file in Notes and Code Samples for now, due to complexity

Committed changes to server\_logging branch and pushed commits (with -u option) to origin

Tuesday 7/28

Discussed friend request issues on production iOS app with Sanjay

Added code to handle denied Facebook permissions case

* Account deleted and alert view (iOS 7) / alert controller (iOS 8) presented if both profile and email permissions denied

Changed instances of deleteInBackground to deleteInBackgroundWithBlock

Looked into use of background tasks to consistently transmit session logs to Parse on app exit

* Added call to beginBackgroundTaskWithExpirationHandler: and endBackgroundTask: on background thread in –applicationWillTerminate
* Added code to end existing background task if overlapping task launched
* Researched threading requirements for background task handling code
  + Looked at Parse sample app AnyPic for example
  + Moved call to endBackgroundTask: to [self.sessionLogs saveInBackgroundWithBlock^(){ …}] completion handler
  + Moved beginBackgroundTask and endBackgroundTask: to main thread after confirming with Apple Docs
* Tested background task code
  + Added command line argument option to logMessages.py

Looked into Parse Analytics

* Added line of code to track app opens in –applicationDidFinishLaunching
* Browsed documentation for tracking other app events, crashes, and push opens

Tested added functionality on iOS 8 (iPhone 6)

* Found and fixed issue – alert controller now presented by logInVC, not defaultSettingsVC
* Looked into “object not found for update” issue seen on attempting to save session logs after terminating verification prematurely and relaunching app
  + Identified cause of issue to be lack of permission (in ACL) to update session logs after deletion of user
  + Considered calling AppDelegate’s -logOut method (and setting ACL to public write) before deleting user
    - Caused crash – did not investigate
  + Decided to always set session logs ACL to public write
    - Added line saving logout status to session logs before all instances of user deletion

Tested push notification functionality (on production iOS app) with Sanjay

Phone call with ExactData

* Agreed to send email to Robert Vincent with list of cities for which email list is desired, and with sample email to be sent out to students (to confirm legality)

Looked into signup with Facebook issue for both new and existing users

* Refactored all signup with Facebook code to separate #pragma mark section
* Added code to handle two subcases if [[FBRequest requestForMe] startWithCompletionHandler] call fails
  + If FBGraphUser object returned is null, logged fatal error; otherwise logged non fatal error and proceeded with same steps executed if call succeeds
* Added code to set username/email for existing users with issue in -viewWillAppear of defaultSettingsVC
  + Determined presence of issue by checking if user linked with Facebook, but email and name both nil
  + Tested change – info correctly set if previously “undefined” in Parse

Removed call to fprintf() from Release mode code and changed scheme back to Debug

Committed and pushed changes to server\_logging and merged branch into develop

Tested changes before submitting new build

* Tried to test on Sanjay’s iPhone, but no wifi connection
* Tested on Ananya’s iPhone (iOS 8)
  + Successfully created account with LinkMeUp signup screen
  + Encountered “Error saving session logs to Parse…at least one ID field (installationId, deviceToken) must be specified…” issue
    - Documentation online suggested deletion and installation of app

Looked into updating Parse and Facebook SDKs

* Downloaded Parse SDK v1.7.5 and imported Parse, ParseUI, and ParseFacebookUtilsV4 frameworks into project
  + Cleaned and rebuilt project, updated some #imports, and rebuilt
* Downloaded Facebook SDK v4.4.0 to address missing FBSDKCoreKit build error
  + Read changelog and instructions for updating SDK from v3 to v4
  + Imported FBSDKCoreKit and FBSDKLoginKit into app
  + Many build errors due to renamed / deprecated functions in v4
* Decided to postpone SDK updates to later version of app
  + Stashed changes and moved to new branch update\_frameworks
  + Deleted two untracked (and unstashed) files in Parse framework

Moved new build to release branch and exported archive

* Used git mergetool to resolve merge conflict on merging develop into release-2.15
* Tagged v2.15 (2.65 build) commit in master
  + Used git tag -d to delete mistaken tags
* Exported archive and uploaded to iTunes Connect via Application Loader

Wednesday 7/29

Merged release-2.15 into master and tagged commit; pushed develop and master to origin

Tested code and reviewed latest git diff before submitting for review

* Tested if PFUser name property correctly set for FBGraphUser with non-null first\_name and last\_name fields
  + Couldn’t test null last\_name case - not possible to remove last name on Facebook
* Tested denied permissions alert view on iOS 7 (again)
* Made some formatting changes in develop branch

Confirmed screenshot resolution to be 72 dpi, as recommended by Apple Docs

Submitted Version 2.15 for review

* Requested expedited review – described critical Facebook signup bug fix

Prepared to migrate landing page to custom website

* Considered various hosting services
  + Read blog post “Using GitHub to Power a Web Project: How and Why”
  + Looked into WordPress and Heroku
* Used Chrome Developer console to look at HTML for LinkMeUp, Endless, and Lo
  + Tried to find Bootstrap template used by Lo on MaxCDN
* Skimmed Twitter Bootstrap’s “Getting Started” guide
* Looked into using AWS to host HTML/CSS/JS files for site
  + Read AWS doc on “Hosting a Static Website” via S3, Route 53, and CloudFront
  + Browsed Hacker News thread “AWS Tips I Wish I’d Known Before I Started”
* Compared prices of several hosting

Changed Facebook share image on KickoffPages to Branding\_Cropped.png

Thursday 7/30

Prepared to migrate landing page to custom website

* Read Startup Engineering PDF on DNS and custom domains
* Compared pricing of various hosting services listed in PCMag article
* Decided to use AWS S3 to host site
  + Widely used, industry grade platform with generous free tier (would likely be free to host static website with low traffic)

Wrote document ConnectionsLogic.txt with friend suggestions pseudocode and sent to Sean

Started work on new website

* Created S3 buckets for root domain, non-www, and logs URLs
  + Added index.html and error.html files
* Started adapting Endless’s HTML and CSS code
  + Changed title and meta properties, copy text, and App Store / Vimeo links
  + Created css/, js/ and images/ folders and uploaded contents
* Successfully configured LinkMeUp favicon, logo, tag line, and iPhone image
  + Vimeo video not embedded
    - Tried to overlay video in iPhone via iframe element
  + App Store badge oversized and cropped
    - Removed background image property from CSS and tried to set badge size in HTML img element – badge disappeared
* Experimented with site background color

Friday 7/31

Tested new version (2.15) in App Store

* Fail to log in (with LMU or Facebook) on Ananya’s iPhone
  + Resolved by switching from LTE to wifi

Worked on configuring HTML/CSS to correctly display App Store badge on website

* Tried to better understand various elements of Endless’ code
  + Modernizr, rel="nofollow", href="#", @media
* Resolved issue by adding missing > before <img…> in <a href=… </a>

Reproduced login failure on develop branch

* Network call to Parse failing in LTE connection

Researched significance of App Store link URL parameters – mt=8, ls=1, us

Worked on embedding video

* Looked into HTML plugins for sublime – found zen-coding and Emmet
* Tried to better understand various elements of Endless’ code
  + z-index, <div> vs. <a>, frameborder="0", position: relative vs. position: absolute, nested <div>s, margin, and top:/left: properties
* Skimmed learn.shayhowe tutorial on adding videos and inline frames to site
* Experimented with nested <div>s and setting margin-top:/margin-left: and width:/height: properties to position video on iPhone

Discussed lag on switching tabs and screen sizes support with Sean

Looked into app landing page templates

* Jesis and Aeria from wrapboostrap.com

Brainstormed work to do in website

Worked on embedding video

* Tested code by resizing browser window
  + iPhone template resizes, but video remains static size
* Switched to using %s instead of fixed offsets to specify position and size of video <div>
  + Video resizes, but does not match iPhone template
* Learned about padding trick
  + Found articles on webdesignerwall and Smashing Magazine detailing a trick for responsive resizing of a YouTube/Vimeo video
    - Add a .video-container class within .screenshot with padding-bottom: set to the height divided by the width of the video
    - Add a .video-container iframe element to style the iframe itself
  + Adapted trick to responsively embed Vimeo video on site
* Tested new code on different browsers and window sizes
  + Video resized with surrounding iPhone
  + Could not set .screenshot size to fit correctly into .phone without modification across different window sizes
  + Lag often visible in resizing of .screenshot
* Looked to better understand various elements of Endless HTML code
  + Researched ms-behavior and htc file type in line -ms-behavior: url(../backgroundsize.min.htc)

Saturday 8/1

Worked on embedding video

* Traced and documented (on paper) structure of KickoffLabs landing page HTML file

Looked at session logs for Sanjay and Kieran Reynolds

* Found “Could not save AB” message in Sanjay’s log
  + Fixed by deleting app and downloading new App Store version (2.15)
* Found multiple failed attempts to verify code in Kieran’s log
  + Tried determining Kieran’s county code
  + Sent text message detailing how to verify number to 3 possible numbers

Created two folders with old copies of website code in Dropbox

* Introduced version folders to more freely experiment with new CSS code

Worked on embedding video

* Tried to better understand various elements of Endless’ code
  + background-size: contain
* Tried replacing Endless’ CSS for top level <div> elements (resizing) with that of KickoffLabs’ (non-resizing)

Added function print\_filtered (log): to logMessages.py to better parse long session logs

* Filtered out recurring log messages from data updates to analyze user J’Lo’s session logs

Looked into landing page templates

* Browsed templates from Dreamhost, Wordpress, and One Page Love
* Found Heyday (hey.co) on One Page Love
  + Downloaded code and assets
  + Tried to display site on computer
    - CSS stylesheet (marketing.css) not being used by HTML file
  + Inspected file/folder structure with Chrome Developer Tools
  + Found Code Beautifier tool to convert minified CSS into human-readable form
  + Looked into how sites could hide code from browser

**Week 11**

Sunday 8/2

Worked on website

* Fixed indentation (standardized to 2 spaces) in index.html
* Continued trying to rebuild Heyday site on local machine
  + Downloaded all images referenced in marketing.css to img/ folder
  + CSS still not used by Heyday’s index.html
* Tried to import iPhone with screenshot into LinkMeUp site
  + Copied img/ into LinkMeUp website
  + Copied CSS corresponding to <div id= "splash", "perfectmemory", "iPhone", and "lockscreen"
  + Lockscreen and App Store badges still not displaying

Fixed broken Kim Kardashian prepackaged link

* Replaced T-Mobile video ID and metadata with that of Kim TV channel

Wrote personal emails to 7 international users informing them of updated app

Cancelled AWeber account

Worked on website

* Investigated why lockscreen image not appearing in iPhone template
  + Added <div class="fluid "> around <div id="splash"></div>
  + Reviewed Startup Engineering PDF on HTML/CSS/JS
    - Copied code into jsfiddle.net – iPhone displayed, but lockscreen and badges missing
  + Looked into CloudFlare jQuery links
    - Visited URLs and looked at minified JS
    - Verified that CloudFlare links are not password protected, etc
* Copied over Facebook pixel code and Pinterest verification from landing page to new site
* Fixed formatting in index.html

Tried to add extractEmails.py and remoteLogging.py to git repo

* Added Production and Analytics/ to gitignore and tried using !<file-name> to selectively include files
* Tried using !\*/ trick to selectively include !extractEmails.py and !remoteLogging.py regardless of position in file system
  + Did not work – git started tracking all files in Production and Analytics/ and other undesired XCode system files selectively included in .gitignore

Worked on website

* Looked into CSS validation
  + Site validator.w3.org found multiple errors in marketing.css
* Changed css file for new LinkMeUp site from style.css (old) to marketing.css (Heyday)
  + Lockscreen appeared in iPhone template!
* Displayed App Store badges by removing leading forward slash from local file URLs
* Set meta properties for site (used by Facebook open graph protocol)
* Added Vimeo iframe in place of lockscreen.png
  + Commented out background:url(../img/iphone/lockscreen.jpg)
  + Added iframe element within <div class="lockscreen-bg"></div>
* Added footer links and change copy on site to LinkMeUp tagline

Discussed Android work to do

Monday 8/3

Sent email with list of remaining issues to Sean

Replied to new users who liked/loved prepackaged links from LinkMeUp H.Q.

Worked on website

* Added meta property keywords to head
* Investigated URLs starting with // referenced in index.html
  + Work in web browser, but fail (silently) when loaded from file on computer
* Uploaded new files (with embedded video) to S3 bucket
* Looked into site content resizing
  + Moved scripts and analytics code into fluid div, as in Heyday HTML
  + Downloaded index.html of Heyday – content still not resizing
* Worked on site title
  + Tried titles from Endless and KickoffLabs
  + Imported Lato font from googleapis URL referenced in old landing page code
  + Experimented with size and weight of font, and positioning (negative margins)
    - Decided to use Lato 300, font-size: 5rem, and no margin

Discussed meeting place with Sean (home, library)

Worked on website

* Worked on site title
  + Tried using icon with text caption as site logo
    - Comparing two variants – left aligned caption and equal-sized caption
    - Set unequal dimensions to preserve aspect ratio
  + Decided to use text only title for now
* Tested changes in browser
  + Uploaded files to S3 bucket
  + Asked Sean to test on IE – iPhone too large
* Looked into site content resizing behavior
  + Imported original HTML and CSS
    - Created new files index-heyday-original.html and marketing2.css (un-minified)
  + Successfully configured smaller iPhone and resizing behavior with new CSS
    - Used index-heyday.html (with http:// URLs) and marketing2.css
      * CloudFlare JS files not loading on index-heyday-original.html
        + Phone crammed between top of window and footer
    - Used new CS un-minifier (cleancss.com) to unminify marketing2.css
      * Phone (still) correct size, and now resizing properly!
    - Tried to find still other CSS un-minifier which would add newlines after each closing brace and list comma separated class/id names on one line
      * Could not find better one than cleancss.com
    - Manually fixed unhighlighted @media blocks in output of cleancss.com
    - Tested on S3
      * iPhone crammed (as in index-heyday-original.html)
        + Uploaded marketing.js to fix issue
      * Switched back to .svg badge, which looked better on mobile
* Brainstormed remaining work to do
* Looked into hiding Vimeo meta content / accessories from embedded video
  + Added relevant parameters badge=0, byline=0, portrait=0, and title=0 to URL
  + Deselected “Show Play bar” in Vimeo video embed settings
* Looked into footer formatting and social icons
  + Removed unused footer links and placed on one line by moving <br>
  + Imported code for social icons from KickoffLabs HTML
    - Imported font-awesome Bootstrap CSS link
  + Worked on reducing gap between social icons
    - Added class “social” to facebook, linkedin, and email icons
    - Set padding-left and padding-right to 0px
      * Made exception for first icon in list (kept padding-left at 16px)
  + Reduced height of footer by setting padding to 30px, instead of 80
* Uploaded updated files to S3 bucket and tested on Chrome

Tuesday 8/4

Made backups of important LinkMeUp materials

* Copied Xcode project folder and new Documents folders to Seagate Slim Drive

Exported leads info (.csv file) from KickoffLabs

Brainstormed work to do

Helped Tony Lu send LinkMeUp crash report

Worked on website

* Added privacy page to site
  + Copied code from KickoffLabs site privacy page to new file privacy/index.html
  + Fixed formatting of site
    - Replaced bullet points (not displaying correctly) to <li> entries in a <ul>
* Changed CNAME record in Weebly to point to S3 bucket
  + Researched how to set S3 bucket as CNAME for a custom domain, without using AWS Route 53
  + Tried setting target to s3.amazon.com and s3.amazonaws.com
    - Caused www.linkmeupmessenger.com to redirect to AWS support page
  + Changed to linkmeupmessenger.com.s3-website-us-west-2.amazonaws.com
* Worked on formatting social icons on mobile (small screen size)
  + Removed extra padding before Facebook icon
  + Worked on putting all social icons on one line on mobile
    - Looked into display: block vs. display: inline-block
    - Set icons as display: inline-block and links as display: block
  + Uploaded new CSS file to S3 bucket and tested on mobile
* Worked on positioning footer at bottom of page, without having to scroll (fixed footer)
  + Experimented with setting position: on footer to absolute and fixed

Started document Android Pre-Launch To Do List

Prepared to cancel KickoffLabs paid account

* Changed KickoffLabs landing page URL to linkmeup-home.kickoffpages.com
* Took screenshot of web traffic info and emailed support about exporting analytics data

Worked on website

* Worked on footer positioning
  + Tried moving footer inside <div class="fluid "> and setting footer margin-bottom
* Centering icons
  + Replaced missing semicolon after margin: 20px in footer ul li.social {…}
* Resolved mismatch in local and web versions of site
  + Local version of site had incorrect padding for footer links
  + Reverted to web version, removing class="…" properties from footer links
* Added terms and support pages to site
  + Moved content from Weebly site to KickoffLabs privacy page to get HTML
  + Copied HTML from KickoffLabs privacy page into new files in site directory
  + Fixed mistakes and updated content on terms and support pages
  + Changed support URL in iTunes connect to point to new page

Tested latest build of Android app and added noticeable issues to Pre-Launch To Do List

Worked on website

* Worked on footer positioning
  + Learned about “fixed footer” concept
  + Examined source code of example landing pages with fixed footers
    - Brandon Walkin, Flandria, Instagram

Cancelled KickoffLabs paid account

Refined and added to Android Pre-Launch To Do List

Wednesday 8/5

Added Facebook share image (Branding\_Cropped.png) to website

* Tested in Facebook Open Graph Debugger
  + Property 'og:url' could not be parsed as type 'url' error
  + Tried removing underscore from name of image (now BrandingCropped.png)
  + Tried adding / after site URL in meta property="og:url"
  + Image now successfully scraped by OGD, but error still present

Sent excerpted list of issues from Pre-Launch To Do List to Sean

Looked into next steps in Android development

* Browsed section on push notification in Parse Android guide
  + Sending pushes may require configuring manifest.xml file
  + Decided to postpone sending push notifications to v1.1 as well
* Researched whether phone number can be read from device on Android
  + Stack Overflow – can be read, but number not always available
  + Looked at permissions requested by Snapchat
    - Screenshoted list shown to user when downloading from Google Play
* Screenshoted screens in Snapchat signup flow

Worked on website

* Tried out Android signup form
  + Decided not to pursue – would require configuration of email service
* Created git repo for website code
  + Read about submodules, but decided to create separate repo
  + Moved My Site to Samvit folder and renamed to LinkMeUp-Web
  + Initialized repo and created gitignore for Sublime projects
  + Made first commit
* Organized files locally and in S3 bucket
  + Renamed different App Store badges descriptively
  + Moved contents of images/ folder into img/
  + Tested site and committed changes
  + Created folders Unused/ to house local files not contained in S3 bucket
  + Fixed broken link to Parse privacy policy on site privacy page
  + Made third commit
* Created develop branch to allow more experimentation with code
  + Removed Google Play badge from master branch and live site
* Worked on displaying iPhone and video on mobile in develop branch
  + Built KickoffLabs site to understand content wrapping behavior
    - Used http://www.websitedimensions.com/pixel/ to pinpoint at what max size content wrapped vertically to support mobile
  + Experimented with code in @media (max-width: 660px) { } section
    - Displayed phone by removing #iPhone { display: none }
    - Copied over and adapted wrapping code from KickoffLabs
    - Still not able to properly set position of iPhone

Discussed meeting time/place with Sean and reserved meeting room in Library

Worked on website

* Enabled versioning in S3 bucket
* Worked on wrapping iPhone below logo and tagline on mobile
  + Read article on float property on css-tricks.com
  + Read article on position property on codemyviews.com

Created document detailing Signup Flow for Sean

* Created flowchart, with screenshots, detailing steps involved in signup flow
* Linked to code gist describing signup with Facebook procedure
* Detailed the steps involved (and possible errors) in verifying user phone number
* Added section explaining need for kDidNotVerifyNumber boolean

Fixed broken thumbnail link for Kim Kardashian master link

* Tested by creating new account, changing URL, and refreshing links

Discussed Signup Flow document with Sanjay

* Improved flow chart – fixed mistakes and added arrows

Sent finalized document to Sean

Thursday 8/6

Added final touches to website

* Moved mobile content wrapping code from marketing.css to test.css in develop
* Merged develop into master
* Added <meta name="apple-itunes-app"…>, <link rel="dns-prefetch"…>, and <meta itemprop…> code from index-heyday.html to index.html in master
* Changed two instances of https:// to http:// in index.html to match dns-prefetch URL
* Committed changes to master and uploaded to S3 bucket
  + Smart App Banner (from Apple Docs) now present on iOS/Safari
  + Removed Smart App Banner (<meta name="apple-itunes-app") and committed
* Brainstormed work to do

Tested website and looked into possible optimizations

* Opened website on Chrome and Firefox (web), Safari (iPhone), and Chrome (Android)
* Researched where in HTML document scripts should be placed
  + Read online that scripts load synchronously, else if otherwise specified, so should be placed near bottom of <body> or loaded asynchronously in head
* Used YSlow to grade webpage
  + Removed link to unused font Lato 100 to reduce number of HTTP requests
  + Replaced old favicon (120 x 120) with smaller image (58 x 58)
  + Browsed Yahoo guide on “Best Practices for Speeding Up Your Web Site”
    - Read about using Content Delivery Networks (CDNs) to speed up website load time
* Tried adapting wrapping CSS for panel screenshots (in Heyday) to #iphone { }
* Looked into an Available on App Store badge with a white outline
* Uploaded changes to S3 bucket and committed to master

Researched Parse performance and alternatives

* Read through Stack Overflow thread “How scalable is Parse?” (http://stackoverflow.com/questions/11283729/how-scalable-is-parse)
  + Mostly negative answers
* Read about Google App Engine (used by Snapchat, Khan Academy) and Firebase

Wrote document Launch Flow for Sean

* Created and refined code gists for Prepackaged Links and Launch Options
* Sent document to Sean

Met with Sean at Issaquah Regional Library

Read first 100 pages of Peter Thiel’s book “Zero to One: Notes on Startups”

Friday 8/7

Brainstormed work to do

Read more of Peter Thiel’s book

Looked into backend and database technologies

* Briefly read about Redis, Go, Kakfa, Elastic Search, and AWS for Mobile

Brainstormed project ideas

* Wrote down list of questions (about user behavior) to answer via analytics suite

Organized Parse User columns in order of importance, moving redundant columns to the end

Tried to learn more about which database is right for LinkMeUp

* Looked into MongoDB vs. PostgreSQL comparisons
* Watched first 20 minutes of Martin Fowler’s lecture “Introduction to NoSQL”

Finished Peter Thiel’s book

Talked to Sean about signup flow and work to do over the weekend

Made commit in develop branch of LinkMeUp

* Read on http://git-scm.com/ that files whose parent directories have been excluded cannot be re-included
* Selectively included extractEmails.py and logMessages.py by excluding Subscription List/ and Remote Logging/ specifically in Production and Analytics/

Organized LinkMeUp folder on Ananya’s laptop

Saturday 8/8

Brainstormed components of Parse performance benchmarking project

Invited Sanjay as developer on Facebook Developers account for LinkMeUp

Looked into performance benchmarking

* Cloned production app in Parse
* Started work on performanceTest.py
  + Used Parse REST API to create 10 user accounts via POST call requests

Experimented with adding icon to website title

* Could not find way to resize icon with title on different browser sizes
  + Tried manually setting correct size of icon for mobile screen size

Continued work on performanceTest.py

* Tried to finding network request timing function in httplib
* Decided to use newer requests module instead of httplib
  + Installed pip and requests
  + Started looking through Quickstart guide for info on POST requests

**Week 12**

Sunday 8/9

Worked on performanceTest.py

* Tried to make POST request with requests module
  + Tried using requests.request('POST', …) and requests.post()
* Reverted to using httplib to create users in LinkMeUp-PerformanceTest
  + Created 1000 users and measured time to create each user with time.time()
* Looked into authenticating with submodule of requests, OAuth1
  + Browsed ouath1\_workflow.rst in request-oauthlib GitHub repo
  + Tried setting X-Parse-REST-API-Key as client\_key and X-Parse-Application-Id as client\_secret, resource\_owner\_key, and resource\_owner\_secret
  + Looked into query and body signing ouath requests

Watched interview with Drew Houston at Khan Academy

Monday 8/10

Discussed Android permissions with Sean

Looked into Sublime plugin for python

* Installed Sublime 3, Package Control, and Anaconda

Started work on analytics suite

* Created python program rankUsers.py
  + Copied getLinkData.py into new folder Production and Analytics/Data Requests
  + Generalized function returnLinkData to returnAllData with function argument
  + Imported file in rankUsers.py by setting PATH via sys.path.insert( )
* Downloaded Parse data (exported on 8/7)
  + Deleted development version session logs from production database
* Continued work on rankUsers.py
  + Determined number of links sent by each user
  + Determined number of friends of each user, via relational ($related) queries
  + Neatly displayed sorted list of user stats via format string with left aligned, fixed width arguments
* Looked into Anaconda package
  + Tried to determine if successfully installed – right clicking on keywords revealed “Anaconda” option, but “Find Usages”/“Show Documentation” not working

Looked into Android app icon

* Decided to order new icon(s) from IconShock with less rounded corners
* Researched size and style requirements
* Sent email to Icon Shock with link to required sizes and style guidelines

Registered for MongoDB University course “MongoDB for Developers”

* Downloaded Week 1 materials

Looked into adding mention of upcoming Android launch on website

* Found and tested “Coming Soon to Google Play” badge
  + Thick white border part of badge – decided against it

Continued work on rankUsers.py

* Determined number of sessions in app for each user
* Looked into character encodings to fix issue with Arabic name
  + Tried adding .encode(‘utf-8’) to format argument user\_name[:20]
  + Tried adding utf-16 support in Terminal preferences
* Added verification status to user\_stats dictionary

Investigated channels of app discovery

* Looked into App Analytics section on iTunes Connect
* Bookmarked all references to App Store page revealed by Google searches for “linkmeup music video messenger”, “linkmeup app store” and “linkmeup samvit jain”
* Looked into Google Analytics for iOS apps

Looked into Android app alpha/beta testing procedures

Created Google Play Developer Console account for Android

* Paid $25 registration fee
* Invited sjain74 as Release Manager

Updated LinkMeUp Planning Doc with remaining work to do on website

Looked into backend technologies

* Read about PostgreSQL, good database choices for analytics data, and performance testing tools
* Watched AWS case study video on Parse

Wrote documents Analytics Plan and Performance Testing Plan

Committed changes (Coming Soon badge) to LinkMeUp-Web

Watched first 6 videos in MongoDB for Developers course

Tuesday 8/11

Read article “MongoDB, Cassandra, and HBase -- the three NoSQL databases to watch”

* Learned that Cassandra is particularly well suited to scaling to more machines

Brainstormed work to do today

Added to Analytics Plan

* Considered use of analytics to determine source of traffic to App Store page
* Looked into White Pages’ API for reverse phone number lookup
  + Useful in determining location of users, to plot geographic spread of app

Continued MongoDB for Developers course

* Watched 7th video on Installing MongoDB for mac
* Downloaded MongoDB tar package and copied unzipped folder to usr/local/bin
* Ran mongod process and mongo shell from Downloads folder
* Could not run files in usr/local/bin from other directories
  + which mongod command not printing out anything
  + Verified that usr/local/bin was in PATH variable
* Moved package from usr/local/bin to usr/bin (where git, etc. are installed)
  + which mongod command still failing
* Could not terminate mongod process
  + kill <monogd-pid> failing to kill mongod
  + Looked at instructions for dealing with unclean shutdown online
    - Tried clearing mongod.lock file

Looked into Cassandra

* Read “A Brief Introduction to Apache Cassandra” on planetcassandra.org
  + Learned about key differences from relational databases and top use cases
  + Browsed through section on “Architecture Overview”
* Browed Quora threads on database choice
  + Learned that Facebook has completely moved away from Cassandra
* Read Facebook’s note on their migration away from Cassandra to HBase

Discussed signup flow with Sean

Worked on performanceTest.py

* Looked into why Anaconda not working
* Worked on logic for creating links in database for each user
  + Looked into Batch Operations in Parse REST API docs
  + Considered using inline, anonymous function for creating list of requests
    - Read online about python’s lack of support for multiline lambda functions
* Renamed all Python files to match standard naming conventions
  + All file names lowercase, with words separated by underscore
* Moved contestDrawing.py to Production and Analytics/
  + Deleted getLinkData.py and getUserData.py
  + Now using get\_class\_data.py instead
* Modified .gitignore
  + Added Production and Analytics/ to git repo and selectively ignored folders
* Refactored performanceTest.py
  + Created submodule create\_data.py called by test\_performance.py

Talked to Sean about signup with Facebook

* Made decision to update Parse and Facebook SDKs
  + Read through Android changelog
  + Could not find docs for older version of Android SDKs

Worked on test\_performance.py and create\_data.py

* Tried to resolve problem in computing network response time
  + Difference between start and end time yielding 0, despite nonzero difference
* Read about request versus response times
  + Added logic to calculate both times
* Resolved subtracting issue by fixing format string – replaced %u with %f
* Refactored create\_data.py
  + Changed code to make only 2 requests – one to create all users at once, and another to create all links
  + Encountered Parse requests limits
    - Read about “This application performed 2000 requests within the past minute, and exceeded its request limit” error
    - Waited before running test\_performance.py again
  + Faced second issue – batch limit of 50
    - Changed code again to make all requests in batches of 50
  + Faced UserCanOnlyBeCreatedThroughSignUpError (code 207)
    - Decided to revert to original program
    - Copied code into create\_data\_batches.py and used git -- checkout <create\_data.py> to restore staged version
* Tested network request/response times
  + Ran test\_performance.py for 100, 1000, and 1000 users
  + No noticeable difference in times

Discussed state of affairs in Android development with Sanjay

Browsed through Android code

* Ran git pull origin in LinkMeUp-Android
* Opened project in Eclipsed, and skimmed through some files

Wednesday 8/12

Removed verification status from rank\_users.py

* Not useful, as already visible in Parse, and not accurate, since mobileVerified field not set for users before Version 2.05 (must look at presence of mobile\_number and facebook\_id)

Brainstormed work to do for Android app

* Added names of some friends with Android phones to Beta Test Emails

Started comprehensive review of all iOS code to identify missing features in Android app

* Created document iOS Code.docx
* Wrote down method names and major functionality in
  + LinkMeUpAppDelegate
  + DefaultSettingsViewController
  + mySignUpViewController
* Made some revisions to DefaultSettingsViewController logic
  + Set user info on Installation on account creation (didLogIn, didSignUp callbacks), not new user launch
  + Moved Signup with Facebook #pragma mark section to below PFLogInViewController delegate methods
  + Added “Incorrect username or password” alert to didFailToLogInWithError

Talked to Exact Data

* Got quotes for double email blast for 1,000 and 55,000 (entire region) recipients
* Learned that minimum purchase size is 5,000 emails
* Learned conversion rates – 1-3% will open email (1 deployment), 10-40% become buyers

Read about ElasticSearch – capabilities and use cases

Worked on new python program print\_recent\_logs.py to print *k* most recent session logs

* Renamed print\_session\_logs.py to print\_single\_log.py
* Added main function to print\_single\_log.py to allow module logic to be imported

Second call with Exact Data

* Got price for 10,000 email
* Got better deal for all 55,000 emails, 2 deployments if purchased before end of week

Continued work on print\_recent\_logs.py

* Added header to session logs containing user name and objectId and log’s createdAt field
* Moved header code to function printSessionLogs (session) in print\_single\_log.py
* Tested python print\_recent\_logs.py *k* and python print\_single\_log.py <object-id> commands

Brainstormed work to do

Read Dropbox blog posts on server logging

* Learned about Scribe and Kafka + Storm combo

Continued work on iOS Code.docx

* Implemented color coding in document specifying feature priority levels
  + Red – critical, must be done before beta launch
  + Orange – important, must be done before public v1.0
  + Blue – useful, must be done before v1.1
* Wrote down method names and major functionality in
  + friendsViewController
  + inboxViewController
  + linkViewController
  + sentLinkViewController
    - Skipped color coding logic related to -loadUpdatedLink and boolean loadedLinkData
  + receivedLinkViewController
  + replyViewController
    - Skipped color coding logic related to justPosted and initialOffset booleans

Thursday 8/13

Wrote follow up email to Icon Shock

Helped Sean with Login and Signup activities in Parse SDK

* Discussed subclassing option in Skype call

Worked on iOS Code Documentation.docx

* Revised decisions about work priority (i.e. color coding) in sent/receivedLinkViewController

Replied to Icon Shock – sent rounded .ai icon file and provided link to Snapchat Android icon

Worked on iOS Code Documentation.docx

* Wrote down method names and major functionality for classes in Messenger tab
  + searchViewController
  + searchResultsViewController
  + contactsViewController
    - Changed SMS link message body to include website URL instead of App Store link

Phone call with ExactData

* Got quote for minimum order size
* Discussed change in prices since day before
* Declined purchase

Helped Sean with Parse app settings

* Uploaded push certificates to LinkMeUp-Dev Settings/Push dashboard
* Added Facebook App ID and Secret to Settings/Authentication
* Looked at Facebook developers account settings
  + Created LinkMeUp-Test
  + Added third key hash to Settings/Android/Key Hashes

Brainstormed work to do on whiteboard

* Must update push certificates (before Sept. 6), support iOS 9 (Xcode 7), and update Parse/Facebook SDKs

Discussed error handling in signup with Facebook logic

Worked on iOS Code Documentation.docx

* Documented verificationViewController
  + Renamed IBAction button action “sendVerificationSMS” (misleading name) to “handleButtonPress”
    - Tested change
  + Change verification code range to [100,000 - 999,999]
    - Looked up best practices for mobile verification codes (5 vs. 6 digits)
    - Tested change

Committed and pushed changes to develop branch

Update LinkMeUp company profile on LinkedIn

Worked on understanding local/server date update code for iOS Code Documentation

* Moved functions called in only one class out of Data.m to sentLinkViewController, receivedLinksViewController, and replyViewController, respectively
  + Documented new functions likeLink: and loveLink: added to replyVC
* Renamed two functions in replyViewController and receivedLinkViewController

Friday 8/14

Finished iOS Code Documentation

* Wrote down method names and major functionality in
  + Data.m
    - Documented functions –receivedLinkSeen and –sentLinkSeen called by both inboxViewController and sent/receivedLinkViewController
  + findContactsViewController
  + LinkMeUpAppDelegate
    - Documented previously omitted #pragma mark sections “Application set up” and “Facebook oauth callback”

Decided to write an analytics suite to be run on MongoDB on AWS EC2 instance

* Detailed MongoDB table schema (column names with data types)
* Updated Analytics Plan document
* Watched videos (up to “Hello World on a Web Server”) in MongoDB for Devs course
  + Copied mongod and mongo directly into usr/bin/
    - Resolved issue where “which mongo(d)” was not yielding path of program
  + Installed bottle via pip
  + Installed pymongo
  + Ran sample programs hello\_bottle.py and hello.py

Committed and pushed changes to develop branch

* Change .gitignore to not exclude “Pre-Launch To Do List” and “Improvements (8-5)”

Recharged Twilio with $20

Helped Sean with prepackaged links logic

* Changed Muse | Undisclosed Desires link in database to video
* Sent screenshots of master links info in Parse to Sean

Started work on comprehensive Android Pre-Launch To Do List based on potential issues identified in iOS Code Documentation

* Tested functionality of and documented issues in Send Link tab
  + Search, Search Results, and Select Contacts screens
* Classified old to do list items

Continued watching videos in MongoDB for Developers course

* Watched videos from MongoDB is Schemaless to Introduction to Python
* Watched Python: Function Calls and Python: Exception Handling

Continued work on Pre-Launch To Do List

* Finished documenting issues in Select Contact screen
  + When through Link.java file in LinkMeUp-Android to see which receiversData fields are currently being set for link sent to non-users

Worked on setting up EC2 instance to run analytics suite

* Found SSH keys in ~/.ssh folder and correct target address under Instances/Connect
* Installed software on EC2 instance following Ubuntu-specific instructions
  + Installed MongoDB via instructions in <http://docs.mongodb.org/master/tutorial/install-mongodb-on-ubuntu/>
  + Installed pymongo via sudo apt-get install build-essential python-dev
  + Installed pip via sudo apt-get install python-pip
* Copied (via scp) rank\_users.py and get\_class\_data.py onto EC2 instance
  + Installed python-dateutil package via sudo pip install python-dateutil
  + Resolved issue in importing get\_class\_data.py from rank\_users.py by using sys.path.insert(0, ‘/home/ubuntu/Data Requests’)
* Looked into Unicode encoding error causing program to crash on Arabian name

Saturday 8/15

Looked into issue tracking software

* JIRA (at least $5/month) and Google Docs (free)

Finished Pre-Launch To Do List

* Made modifications to Select Contact screen section
* Tested functionality of and documented issues in
  + Friends Tab
  + Inbox Tab
  + Login/Signup/Forgot Password Screens
  + Signup Flow
    - Signup with LinkMeUp
    - Signup with Facebook
* Documented issues in (did not test, or testing not applicable)
  + Coding Style
  + Data model
  + receiverData updates
* Finished document and sent to sjain74@gmail.com

Discussed Pre-Launch To Do List with Sanjay

* Changed color coding of some items from red (before beta) to orange (before v1.0)
* Went through document up to Search Results Screen

Worked on Analytics Suite

* Researched vi vs. vim (vs. emacs)
* Disabled Anaconda linting
  + Saved setting {"anaconda\_linting\_behaviour": "save-only"} under Settings – User
* Resolved pymongo import error on EC2
  + Used sudo pip install pymongo to install
* Switched to using vim
  + Found documentation on basic commands
  + Commented out slow relational query for user friends
* Switched to using usernames only to prevent Unicode error on names
* Added pymongo code to save user data to a MongoDB “users” collection
  + Displayed info in mongo shell
    - Set DBQuery.shellBatchSize = 300
    - Used db.users.find().pretty() to print neatly
  + Deleted contents of MongoDB with db.dropDatabase() before rerunning python rank\_users.py
* Looked into continuously running python program on EC2 instance
  + Learned about Cron (GNU/Linux daemon for launching scheduled scripts)
  + Looked into MongoDB “insert if not exists” logic

Continued discussing Pre-Launch To Do List with Sanjay

* Discussed up to Inbox Tab
* Finished discussion after break

Started work on Google Spreadsheet “Beta Launch To Do List”

* Created schema (Priority, Assigned To, Status, Task, Details, More Details)
* Copied “red” to do list items up to Sent Links Table

**Week 13**

Sunday 8/16

Finished work on Google Spreadsheet “Beta Launch To Do List”

Continued work on analytics suite and MongoDB

* Learned about upsert operation on Stack Overflow
* Watched videos in Chapter 2 of course: “Upserts” and “Introduction to Week 2” through “Secrets of the Mongo Shell” in MongoDB for Developers course
* Tried to implement upsert
  + Syntax error

Added “H” in priority column for most important items in Google Spreadsheet

Continued working through MongoDB for Developers

* Watched videos “Secrets of the Mongo Shell” through “Querying Using $gt and $lt”
* Watched videos “Wholesale Updating…” through “Using the $unset Command”

Set Skype meeting time with Sean and sent Google Spreadsheet

Watched two more videos in course and resolved upsert syntax issue

* Did quiz for “Using the $unset Command”
* Watched “Using $push,$pop,…” through “Upserts”
* Fixed syntax issue with upsert operation by finding and using correct pymongo statement, instead of MongoDB shell command

Looked at session logs via python print\_recent\_logs.py program

* Found Facebook log in error involving invalid session token: “Error validating access token: Session does not match current stored session.”
* Added entered phone number to error print statement in verificationVC

Prepared for meeting with Sean

* Brainstormed list of items to mention/discuss

Tested MongoDB upsert operation

* Executed find query for “username”: “ajain20517” and noted increase in session count
* Noted increase in number of users since database creation
* Experimented with $gt token to filter by number of links sent and session count

Meeting with Sean

* Went through Google Spreadsheet
* Discussed extension of work contract into September

Monday 8/17

Started filling out app information in Google Play Developer Console

* Added app name, short/full description, contact details, and privacy policy link
* Looked into other parts of Developer Console

Looked into backing up files on EC2 instance

* Tried to use vim yank command to copy python file from EC2 instance to local machine
* Looked into backing EC2 instances with Elastic Block Store (EBS)

Sent emails to two new link senders from Greater Seattle Area about their entry into the contest

Backed up files on EC2 instance

* Created snapshot of instance on EC2 dashboard
* Manually copied rank\_users.py into new file rank\_users\_mongodb.py on local machine

Discussed country code logic with Sean

* Read online that no North American country codes begin with 0 or 1 (U.S. country code)

Continued work on analytics suite

* Looked into setting up Cron jobs on Ubuntu
  + Added python …/rank\_users.py as Cron job via crontab –e
  + Used ps aux | grep python to determine if Cron job currently running
* Created python program print\_data.py
  + Changed vim tab settings by editing ~/.vimrc
  + Added query parameter “order: ‘updatedAt’ ” to getClassData
* Created python program analyze\_session.py to extract insights from session log
  + Added logic to determine notifications setting and device model
  + Added keys “notifications” and “device\_model” to user\_stats dictionary in rank\_users.py
* Tried to resolve “NameError: global name ‘log\_user\_stats’ is not defined” caused by generator expression
* Prepared to create git repo on EC2 instance
  + Moved Data Requests/ folder into Analytics/ and modified import file paths
  + Moved contents of Analytics/ into new folder LinkMeUp-Analytics/
  + Initialize empty git repo

Continued MongoDB for Developers course

* Watched “Inequalities on Strings”, “Using regexes, $exists, $type”, and “Using $or”

Continued work on analytics suite

* Resolved issue with returning dictionary in list by replacing generator expression with filter(lambda user\_stats: …)
* Tested rank\_users.py with three new fields “notifications”, “device\_model”, and “verified”
  + Logic for determining verification status of pre-v2.0 users not correct

Continued work on analytics suite

* Fixed criteria for determining verification status of pre-v2.0 users
  + Considered mobileVerified field in conjunction with Facebook link status
  + Added case to handle users whose phone numbers were manually filled in Parse
* Added parameter sort\_by to function returnClassData in get\_class\_data.py
  + Link and Logs data now returned in order “updatedAt”, while \_Users sorted by “createdAt”
* Made first commit in LinkMeUp-Analytics
  + Renamed rank\_users.py to calc\_user\_stats.py
* Created repo LinkMeUp-Analytics and pushed commit to remote origin
  + Cloned repo in Production and Analytics/EC2 Files on local machine
  + Changed import path in calc\_user\_stats.py to relative path
    - Tested changed on EC2 instance and made second commit
    - Pulled change onto local machine and successfully rank program

Created repo for and pushed commits in LinkMeUp-Web to GitHub

Uploaded Android screenshots to Google Play Developer Console

Continued work on analytics suite

* Configured vim on local machine
  + Added tab and syntax highlighting settings to ~/.vimrc
* Added support for optional arguments (\*args) in get\_class\_data.py
* Created file user\_stats.py with class UserStats to hold analytics fields
  + Read about python class naming conventions and modules vs. packages
  + Considered switching out user\_stats dictionary with UserStats() object
  + Decided not to complicate structure of calc\_user\_stats.py

Tuesday 8/18

Wrote email to Jeffrey at Twilio and replied to Icon Shock

Worked on critical updates for v2.20 of iOS app

* Reorganized code
  + Moved some code in -handleButtonPress to separate function –verifyCode (verificationVC)
  + Moved #pragma mark Signup With Facebook methods (defaultSettingsVC) below #pragma mark PFLogInViewController delegate methods
* Change mobile number keypad in verificationVC to type NumbersAndPunctuation
  + Tried other keyboard types – none with only digits and + sign, and done button
  + Readded and updated user input sanitization code to allow entry of characters in set (-)\*#., and to strip these characters from entered text
    - Looked up list of all possible characters in international phone number
  + Tested change
    - Both entered and sanitized numbers now included in error print statement
* Modified phone number comparison logic in –loadSuggestions
  + Renamed –removeNonNumericFromPhoneNumber to -sanitizePhoneNumber
    - Changed new function to leave in + sign, in addition to 0-9 digits
  + Considered expanding function –allVariantsOfPhoneNumber to better support friend suggestions for international users, by adding parameter userNumber
    - Renamed to –allVariantsOfContactNumber: givenUserNumber:
    - Considered using Twilio Lookup Tool to determine appropriate country code from userNumber and preprend to contactNumber, if not present
      * Lookup Tool provides alphabetical country code (i.e. AM), not phone code – would require secondary lookup for alphabetical code
    - Decided instead to expand logic for U.S. users only
      * Commented out givenUserNumber: from function signature
      * Three variants of phone number now added for U.S. users, regardless of variant included in address book
        + Country code and plus sign (+1), country code only (1), and no country code
        + Tested logic with all 3 types of address book entries
  + Replaced local sanitization code from –saveAddressBookContacts (which removed + signs from phone number entries) with call to –sanitizePhoneNumber
    - Tested change by looking at my saved address book in Parse
  + Removed inaccurate line “[Your phone number] is used only for verification purposes” from verificationVC xib file

Worked on analytics suite

* Came up with project idea - user location visualization tool
  + Looked into mapsdata.co.uk and Google Maps Web API
* Committed and pushed changes from previous day to LinkMeUp-Analytics
* Worked on incorporating config text file with time of last data update in analytics suite
  + Switched to using named optional arguments, instead of \*args array
  + Started by adding hardcoded "updatedAt": {"$gte":…} query constraint to get\_class\_data.py
  + Added config file last\_updated.txt to same directory as get\_class\_data.py
    - Tried opening and reading from file using python with as construct
      * Used w+ to create file if not already present
      * Created file\_path using relative path from script location \_\_file\_\_
    - New\_time (set before Parse request) recorded to file at end of program
      * Truncate command used to fully overwrite existing file
      * Switched to doing conditional read if file exists (if os.path.isfile(file\_path))
  + Moved config file and related logic to same directory as calc\_user\_stats.py
    - All calls to returnClassData in one invocation of calc\_user\_stats.py must use identical version of last\_updated.txt
    - Added two optional arguments to returnClassData signature - last\_updated and new\_updated
      * new\_updated used to set upper bound on query scope (i.e. return all links where last\_updated <= createdAt < new\_updated)
  + Watched videos “PyMongo: Updating” and “PyMongo: Insert\_one” in MongoDB for Developers course
    - Learned that db.users.insert( ) command is deprecated in pymongo
    - Replaced insert() with calls to insert\_one() or update\_one()
      * User objectId used as \_id field in database
      * “Links\_sent” and “sessions” incremented in update\_one( ) with values from new data
    - Fixed two errors in calc\_user\_stats.py logic
      * “Notifications” and “device\_model” fields only updated if new value not null
      * “Link\_sent” and “sessions” only incremented if no old\_time value or if createdAt >= old\_time (to avoid overcounting)
  + Tested functionality of calc\_user\_stats.py with config file on local machine
  + Committed and pushed changes to LinkMeUp-Analytics
  + Tested validity of datetime string comparison logic
    - Read online that isoformat datetime strings can be reliably compared
  + Added last\_updated.txt to .gitignore in new commit
  + Pulled changes on EC2 instance and confirmed functionality of program

Looked into Google Play Developer Console

* Changed contact email, read about Content Rating (APK must be uploaded before setting), and chose distributions (all countries/territories)

Finalized version 2.20 of iOS app

* Changed logic in contactsVC so that links sent to self appear in Received tab as well
  + “New link” push notification suppressed, if sent to self
* Committed and pushed changes to develop branch

Implemented steps in gitflow and submitted v2.20 for review

* Created/committed to new branch release-2.20
* Exported archive and uploaded to iTunes Connect
* Submitted v2.20 for review
* Merged release-2.20 into master and tagged commit
* Merged release-2.20 into develop
* Pushed develop and master to origin

Wednesday 8/19

Purchased Android icon design service on PayPal from Icon Shock

Added plus sign by particularly high priority items in Beta Launch To Do List spreadsheet

Worked on analytics suite

* Brainstormed user location visualization project components and steps
* Found site batchgeo.com for plotting location data on a map
* Added code to calc\_user\_stats.py and created separate file print\_last\_updated.py to print time stamp contained in last\_updated.txt in PST
  + Used code from contest\_drawing.py
    - Parsed string into datetime with dateutil.parser.parse( )
    - Converted to location aware time and then set time zones with pytz
* Looked into Whitepages Pro API
  + Experimented with API online by making some phone number lookup requests
  + Minimum package $30/mo, so decided to look for other services
* Found reversephonenumber.com
  + Tried to do HTTP GET request to site
  + Not able to retrieve result programmatically
  + Read about web scraping
    - Decided that extracting info from HTML response of reversephonenumber.com not feasible solution
* Found spokeo.com, peoplesmart.com, and checkpeople.com
  + Spokeo – could not search for non-10 digit (i.e. international) numbers
  + PeopleSmart – asking for personal information before displaying results
  + CheckPeople – asking for $1.00 to view full phone report
* Found neutrinoapi.com
  + Wrote phone\_lookup\_neutrinoapi.py to make API request with urllib2
  + Not retrieving detailed enough location info; only enough to *validate* number
* Returned to Whitepages Pro API and decided to use it for proof of concept purposes
  + Copied phone\_lookup\_neutrinoapi.py to create phone\_lookup\_whitepages.py
  + urllib2 request with urllib.urlencode(params) not working for whitepages
    - Solution: manually generated API request URL by concatenating base URL with key names and parameters
  + Worked on program process\_whitepages\_json.py to process text file with response
    - Tried replacing json with simplejson module and using jsonprettyprint.com to examine structure of response
    - Determined cause of issue – ‘u’ symbol prepended to all key and values in terminal output
* Worked on incorporating Whitepages lookup code into calc\_user\_stats.py
  + Imported module phone\_lookup\_whitepages.py in calc\_user\_stats.py
  + Added fields mobile\_number, city, state, and country to user\_stats dictionary
  + Wrote logic to handle two cases
    - In both cases, set city, state, and country on user\_stats and added fields to database entry for user
    - If file with phone number data for user does not exist
      * Query Whitepages api (call function in module), write result to file <username>\_phone\_data, and process JSON result
      * Tested with new user luinny42
        + Wrote file, but could not process result without error
    - If file <username>\_phone\_data already exists
      * Read from file and process JSON input
      * Resolved JSON parsing issue (TypeError: list indices must be integers, not str)
        + Incorrect understanding of JSON schema

results[“results”] is an array, not dictionary

* + - * + Changed results[“results”][“best\_location”] to results[“results”][0][“best\_location”]
        + Successfully parsed location data for luinny42
  + Wrote program print\_location\_data.py to verify JSON parsing logic
    - Used json.dumps( …, sort\_keys=True, indent=4) to pretty print result
    - Tested on luinny42\_phone\_data file
  + Successfully ran calc\_users\_stats.py on all user data!
    - Location data retrieved from Whitepages, saved to file, and parsed for 122 more users (besides luinny42) with non-null mobile\_number field!
    - All location data added to mongo database
      * Queried DB for cities/countries and retrieved associated users
      * Tried query for international users (with $ne and $exists)
  + Refined and finalized phone number lookup functionality
    - Added code to create properly formatted/aligned location string
      * Did not test – no new users to run calc\_users\_stats.py again
    - Set fields city, country, and state in update\_one, as well as insert\_one
    - Moved phone number lookup code (neutrino, whitepages, print\_location\_data.py) into separate folder
    - Read about python exceptions, to avoid partial update of mongo database
      * Not solution to issue – code before try block fails still executes
    - Added Whitepages Data/ to .gitignore to protect user data privacy
* Looked into location data plotting tools
  + Experimented with BatchGeo
  + Looked into Google Maps APIs

Took screenshots of LinkMeUp page on iTunes

Confirmed functionality of location string truncation code after 2 updates in Parse DB

* Moved location information to end of print statement
* Adjusted width fields in format string to properly space all output
  + Tested by removing last\_updated.txt, clearing mongo database, and rerunning calc\_user\_stats.py several times

Tested LinkMeUp build on Ananya’s laptop

* Cloned private repo by using git clone https://samvitj@github.com/samvitj/LinkMeUp
* Ran program on my iPhone
  + Worked without modifications!

Transferred additions made on Tuesday to local copy of Android Pre Launch To Do List (not updated) to Google Doc version of file

Looked through Google Docs version history for spreadsheet and word document

Worked on testing Android code and updating Beta Launch To Do List

* Addressed all changes up to Search Results Screen
* Addressed some changes in Select Contacts Screen, Inbox Tab, and Friends Tab sections

Thursday 8/20

Finished testing Android app changes from Monday – Wednesday and updating To Do List

* Imported screenshot of contact list and uploaded image “Contact List (8/19)” to new Dropbox shared folder “Android Development”

Committed and pushed changes to LinkMeUp-Analytics

* Deleted junk file last\_updated\_test.txt, amended commit, and forced pushed change
* Copied Whitepages Data/ folder onto EC2 instance via scp
* Pulled new commit onto EC2 instance
  + Used git reset --hard HEAD to clear local modifications
* Used sudo pip install to get pytz
* Ran python print\_last\_updated.txt successfully on EC2 instance

Researched Google Maps APIs

* Looked into the differences between Embed API vs. Static API
* Researched how to display multiple markers on an Embed API map
  + Online consensus was to use general purpose JavaScript API instead
  + Found blog post with example code

Added to Android beta testers list

Started work on embedded Google Map

* Created files map/index.html and js/map.js in LinkMeUp-Web
* Tried to import blog post code via <script src="../js/map.js"></script> - not working
* Got Google Developers API keys (browser and server) to run Google Maps sample code
  + Displayed blank map at first
  + Resolved typo in JavaScript to display full screen map centered on Sydney
* Commented out jQuery(function($){ … }); in blog post code and changed name of callback to initMap() to display map with markers
  + Browsed Google Maps JavaScript API Reference to learn how to plot cities, instead of exact latitudes and longitudes
  + Experimented with blog post code by setting markets to be user locations and adjusting map zoom level

Looked into retrieving data from mongo database on remote server for website map

* Rewatched MongoDB lectures “Hello World, Mongo Style” and “Hello World on a Web Server”
* Researched how to link a website to a remote database
  + Tried different search queries
    - How to use Python and MongoDB as website backend
    - How to get data for Javascript file from EC2 instance
    - How to get data from MongoDB running on remote server
    - How to link AWS S3 (website) to EC2 instance (data)

Replied to Icon Shock, requesting redesign of icon

Tested Android app changes from Thursday and updated Google Spreadsheet accordingly

Continued researching how to link a website to a remote database

* Researched how to get data from EC2 server without SSHing (i.e. from a security angle)
* Read about Django (djangobook.com) to better understand concept/function of web framework technologies
  + Learned that Django primarily supports SQL databases
* Researched python web microframeworks such as Bottle and Flask
  + Revisited basic Bottle code in hello.py from MongoDB for Developers
  + Looked into comparisons of web microframeworks, such as http://www.slideshare.net/r1chardj0n3s/web-microframework-battle
* Decided to use Bottle framework due to limited backend functionality requirements
  + Researched how to set up a basic HTTP to Python connection with bottle

Finished testing Android app functionality and documenting issues to be addressed on Friday

* Added two screenshots of Select Contacts screen to shared Dropbox folder

Friday 8/21

Extended Skype call with Sean

Wrote email to Whitepages

Looked into using Bottle to send JSON from remote machine to website

* Tried setting host to be website IP address – getting “socket.error: [Errno 49] Can't assign requested address” in terminal
  + Looked into meaning of “host”, “port”, and “localhost”
* Created file Web Backend/backend.py

Tested out newly approved version 2.20 of app

Continued work on configuring map backend

* Researched how to reference object returned by Bottle function in Javascript
  + Added statement returning distinct list of cities in database – db.users.distinct(“city”) – to backend.py
  + Tried to reference returned array/dictionary in map.js via notation {{‘cities’}}
* Added AJAX/jQuery GET request to map.js
  + Getting syntax error “Uncaught ReferenceError: $ is not defined” in JavaScript console
  + Resolved by import jQuery in map/index.html
* Worked on resolving “No ‘Access-Control-Allow-Origin’ header is present on the requested resource” error message in JS console
  + Used code from gist https://gist.github.com/richard-flosi/3789163 to configure CORS on response headers
* Successfully printed list of cities contained in mongo database in JS console!
* Worked on returning list of location arrays to website
  + Added latitude and longitude fields to user\_stats and reran calc\_users\_stats.py
  + Added logic to backend.py to create and return list of three element arrays (city, state; lat; lng) or (country; lat; lng)
  + Successfully printed list of arrays in JS console

Worked on displaying locations on map and customizing display

* Added function addMarkers() to map.js to create markers for all user location points
* Centered map properly on the United States by hardcoding coordinates for map center
* Worked on displaying info markers
  + Refactored code in map.js, changing local variables into globals and moving code from initMap() to addMarkers()

Started work on configuring EC2 instance as server for website

* Copied new user phone data to EC2 instance
* Committed and pushed changes to LinkMeUp-Analytics (introduction of latitude/longitude fields)
* Pulled changes onto EC2 instance and repopulate mongo database
* Set inbound security policy for EC2 instance to allow HTTP connection from site IP
  + Still getting “OPTIONS http://localhost:8082/ net::ERR\_CONNECTION\_REFUSED” error

Saturday 8/22

Briefly tested Android app

Brainstormed remaining work to do in user location mapping project

Looked into configuring EC2 instance as web server

* Researched how to set security group of EC2 instance to allow request from webpage
* Connection failing with AJAX URL set to “http://localhost:8082/ and Bottle process running on EC2 instance
  + Tried changing port to 8080
  + Tested webpage on Ananya’s laptop with original setup (Bottle process running on my machine, port 8082) – didn’t work
    - Learned that if request is made to localhost, same computer must be running Bottle/mongo (i.e. act as sever)
* Changed target URL in AJAX request to public IP of EC2 instance
  + Changed port to 80 (HTTP) to match EC2 security rule setting
    - Started running Bottle via sudo python backend.py
  + Tried running Bottle with host set to public IP of EC2 instance
    - Getting “socket.error: [Errno 99] Cannot assign requested address” error
    - Switched back to using localhost

Email new Android app icon to Sanjay

Tested Android app and updated Beta Launch To Do List

* Assigned most pressing issues to Sanjay/self and important issues to “Sean (next week)”
  + Less important issues unhighlighted and not assigned

Continued work on configuring EC2 instance as web server

* Skimmed Android guide on EC2 Instance IP Addressing
* Researched how to make requests from Amazon S3 to EC2
* Tried executing curl command from local machine to public IP
  + Getting “couldn’t connect to host” error
* Tried stopping/restarting EC2 instance
  + Replaced old public IP with (different) public IP of restarted instance

Organized code in LinkMeUp-Web and deleted unused files from S3 bucket

* Moved unused JS, CSS, and image files to new “unused” folders
  + Deleted corresponding files from S3 bucket
* Renamed “Unused” folders to “unused” via git mv command
* Investigated errors in JavaScript console when running website homepage
  + Font files (Museo Sans, etc.) missing
  + Removed line from Google Analytics code with syntax error
    - ga('set', '&uid', {{USER\_ID}});
* Tried to resolve Facebook Open Graph debugger issue with share image
  + Switched order of content and property in meta tags
  + Changed image name from BrandingCropped.png to branding-cropped.png
* Changed some other image file names (logoLeft, logoEqual) to follow consistent naming convention lowercase-with-hyphens

Successfully configured EC2 instance as web server!

* Change inbound security rules to allow HTTP requests from my machine (i.e. browser)
* Change host in backend.py to be *private* IP address of EC instance

Worked on customizing user location map

* Set up cron job python home/ubuntu/LinkMeUp-Analytics/calc\_user\_stats.py to run every 10 minutes
  + Tried to determine if cron job successfully running
    - Used ps aux | grep python to look at running python processes
    - Checked mongo database for new user entries
    - No indication that calc\_user\_stats.py executing
* Removed .pyc files from git repo on EC2 instance
* Made map full screen by removing map\_wrapper div from map/index.thml
* Looked into adding page title and legend to map
  + Not able to add page title on top of map (i.e. as overlapping div element)
  + Legend (from Google Maps sample code) not showing up – no set of custom icons defined
* Worked on displaying different colored markers depending on time of city addition
  + Found URLs for markers in other colors
  + Added createdAt field to user\_stats dictionary and time code logic to backend.py and map.js

Made changes/additions to Android code base

* Worked with Sanjay on moving ParseAnalytics.trackAppOpenedInBackground() to LMUApplication.java and setting correct message body for SMS Links
  + Made commits and pushed changes
* Added code to set installation / isAndroid property on user object
* Modified signup with Facebook logic
  + Moved statement saving facebook\_email to error handling code
  + Set first\_name field
* Created function saveUserOnInstallation() with code previously in TopActivity.java
  + Moved function call to ParseLoginFragment / ParseSignupFragment
  + Introduced line saving “user\_<object-id>” to channels field on Installation
* Refactored saveInstallationOnUser() and saveUserOnInstallation() to new file Util.java
* Committed and pushed changes

Continued work on customizing user location map

* Fixed issue with data comparison logic
  + Successfully displayed markers of 3 colors on map
* Added legend to map
  + Introduced function createLegend() to map.js to iterator over icons and create legend entry for each
* Committed and pushed changes to LinkMeUp-Analytics from local machine
  + Pulled changes onto EC2 instance, after resetting local modifications
  + Tested new code with EC2 instance as web server

Made changes to LinkMeUp-Android

* Modified master links duplication code in AddressBookExplanationFragment.java to match corresponding iOS code
  + Added line query.orderByAscending("createdAt") to retrieve links in correct order
* Committed and pushed change (did not test)

Tested map with new user location (New York, NY) by rerunning calc\_users\_stats.py

* Yellow marker appeared in correct location

**Week 14**

Sunday 8/23

Worked on Android code

* Resolved crash in AddressBookExplanationFragment.java
  + Included sender key in query for prepackaged links
* Addressed failure to save mobileVerified false status to Parse
  + Moved call saving user in background out of saveInstallationOnUser() to avoid two overlapping, identical updates
  + Changed saveUserOnInstallation() and saveInstallationOnUser() to setUserOnInstallation() and setInstallationOnUser() respectively
* Debugged new failure to updated mobile\_number or mobileVerified true status
  + Changed to development database keys – problem not seen
  + Set breakpoint and ran app in debug mode – no indication of cause
  + Deleted app from phone and redownloaded after noting null installation on user
    - Issue disappeared with creation of new installation
* Committed and pushed changes to master

Committed and pushed previously staged changes in LinkMeUp-Web

Finished filling out required fields in Google Play Developer Console

* Uploaded Android APK
* Selected “Closed Beta” option and added sjain74@gmail.com as first tester
* Exported 512 x 512 version of square app icon from .ai file and uploaded to console
* Filled out content rating questionnaire and remaining fields in Pricing & Distribution
* Uploaded feature graphic
* Published build

Added 2 more email addresses and several more names to Beta Emails list

Tested map webpage on Firefox

* Getting “google is undefined” error at first, but markers appeared on refresh

Worked on setting up cron job on EC2 instance

* Created shell scripts run\_analytics.sh and reset\_database.sh
  + Changed #!/bin/sh to #!/bin/bash to force use of bash instead of default shell
* Checked whether cron daemon process running
  + Used ps -ef | grep cron to list running cron processes
* Switched to editing root crontab by running sudo crontab –e
  + Configured vim.basic as default editor
  + Added test command \* \* \* \* \* /usr/bin/uptime > /tmp/uptime
    - Uptime successfully being printed to file
  + Tried running both /bin/bash …/run\_analytics.sh and python …/calc\_user\_stats.py as cron jobs
    - Blank output file (output.txt) being created, but last\_updated.txt unchanged
* Tested bash command by running /bin/bash run\_analytics.sh manually
  + Database successfully populated and output printed to console

Added case to location string logic in backend.py

* Location string variable introduced and set to (city, country) if state missing
  + Used to fix issue with city in Peru which was being displayed as Arequipa, None

Committed and pushed changes to Analytics repo

Worked on beta testing

* Sent emails to Shreyas and Ben
* Wrote document Components to Test
* Contacted more friends on Facebook about being beta testers

Continued work on setting up cron job on EC2 instance

* Switched back to using normal user’s crontab, instead of root’s
* Temporarily changed cron job back to python …/calc\_user\_stats.py
* Got idea to redirect error (not output) to file output.txt
  + Looked into resolving error with importing get\_class\_data module
  + Returned to using root and shell script
  + Tried specifying which version of python to use (i.e. 2.7) in run\_analytics.sh
    - System unable to find /usr/bin/python2.7
  + Added cd command to run\_analytics.sh before line executing program
    - Cron job successfully executing!
* Fine tuned cron job configuration
  + Redirected output to file output\_analytics.txt and errors to errors\_analytics.txt
  + Set cron job to run every 5 minutes

Made modification to user location map

* Added logic and marker for cities added in the last hour
* Committed and pushed changes (shell script, new marker) to Analytics repo
* Tried executing reset\_database.sh – syntax error

Updated Beta Launch spreadsheet with items to do next week

* Added screenshots of sign up flow issues experienced by Anne to Dropbox folder

Continued contacting and working with beta testers

Monday 8/24

Checked consistency of number of markers on map (142), number of files in folder Whitepages Data (142) and number of API requests used (148)

Refined Beta Launch To Do List

Brainstormed points to discuss with Sean, including beta launch, celebratory dinner, and extension of work contract, and talked to Sean on phone

Downloaded Android icon zip file and uploaded 512 pixel icon to Developer Console

Internship preparation

Worked on refining user map

* Changed legend title to “Cities with LinkMeUp users”
* Investigated possible optimizations and alternatives to slow AJAX request
  + Looked into use of loading indicators

Helped Sean and discussed state of affairs

* Created gist with address book parsing code
* Discussed completed items in Beta Launch To Do List over phone call

Worked on improving marker load time

* Used YSlow to grade webpage and pingdom to classify load time by type of activity (i.e. DNS search vs. waiting for server)
* Read Yahoo tips on optimizing website performance

Removed unused inbound security rules from EC2 instance

* Confirmed that browser-server connection not broken if IP address 199.34.228.75 (linkmeupmessenger.com domain) not supported

Tested issues addressed by Sean today and created to do list for Tuesday

* Updated status of completed and verified items in Beta Launch spreadsheet
* Created gist with code for sending push notifications
* Added 3 new items to Beta Launch spreadsheet

Worked on finalizing user location map

* Added code to round user latitude and longitude to 2 decimal places (0.7 miles)
  + Committed and pushed changes on local machine, and pulled on EC2 instance
* Tested changes
  + Inspected array elements in JavaScript console
    - Rounding correct, but entries with null location info (i.e. no mobile number) also being sent to browser
  + Fixed incorrect pymongo query for users with valid latitude/longitude values
    - Looked up correct syntax, changing “$exists”: True to “$ne”: None

Tuesday 8/25

Sent email to Whitepages about number of queries/pricing plan desired

Looked into Android work to do

* Sent message to Sean about important issues to address
* Got two crash logs from Ashima
* Invited Sean to Google Play Developer Console

Interview practice

Added payment information to Android Development/Meeting Notes

Interview practice

Looked into accidental push notification send

* Removed distribution push notification certificate from development database

Worked on improving marker load time

* Added code to backend.py to print mongo init time, DB query time, and data gen time
  + Negligible (less than 0.01 seconds) compared to observed marker load time
* Committed and pushed old changes to LinkMeUp-Web
* Looked into difference between $(document).ready(function() { and $(function() {
* Researched how to speed up AJAX request time
  + Isolated issue to slow DNS lookup
* Installed/imported cherrypy and added optional parameter server='cherrypy' to Bottle run() command
  + Markers loaded quickly on first trial, but now getting “Google Maps Uncaught TypeError: Cannot read property 'LatLng' of undefined”
* Worked on resolving bug with asynchronous data/map load logic
  + Looked up and tried to understand use of async and defer keywords
  + Introduced boolean hasInitMap to ensure that addMarkers() only called if map initialized
* Markers not loading if server request completed *before* initMap
  + Removed initialization statement markers = new Array() in initMap()
    - Added null check in createLegend() instead – addMarkers() only called if marker array present
* Finalized changes
  + Removed extra print statements
  + Decided to not investigate script loading order any further
    - Google Maps API (async defer) script request moved to top of index.html
    - Synchronous jQuery and map.js script calls not changed (for now)

Looked into merge conflict resolution between diverging histories in LinkMeUp-Android

Finalized changes to user location map

* Committed and pushed changes to LinkMeUp-Web
* Tested map on Firefox
  + Markers loading quickly, and no “google is undefined” error present anymore
* Added code to print request time (in PST) in Bottle function
  + No status statements printed when using cherrypy as server
* Committed and pushed changes to LinkMeUp-Analytics