Gabriel Chapman (Chappy) Asel

1943 Mt Vernon Ct • Mountain View, CA 94040
chappyasel@gmail.com • (703) 677-2825
chappyasel.com • github.com/ChappyA12

EXPERIENCE

Sep '21 – Present   **Apple** – AR/VR Software Engineer   **Sunnyvale, CA**
- Team: TDG – AR/VR Group – Frameworks Team

Jan '21 – Apr '21   **Proof Diagnostics** – Engineering Consultant (part-time)   **Seattle, WA**
- Worked with design and engineering teams on developing an initial website in preparation for public launch
- Implemented aspects of low-level BLE object transfer protocols between firmware and mobile application
- Identified and fixed critical, longstanding flaws in firmware implementation
- Provided miscellaneous engineering support and guidance

Jul '20 – Sep '20   **Apple** – AI/ML Software Engineering Intern   **Seattle, WA**
- Conducted a user study to answer key questions and determine metrics for eye tracking on mobile devices
- Implemented an algorithm for dynamic eye tracker recalibration based on existing system interactions
- Designed a system for pre-loading asynchronous content using interest prediction derived from gaze data
- Demoed a proof-of-concept of intelligent UI element selection, leveraging gaze data and voice input
- Created a reusable iOS launch daemon for study control and data collection in future studies within Apple
- Developed a modular iOS gaze framework, facilitating the development of future gaze-powered experiences
- Presented my project's findings to organization executives and team leads with positive reception

Jan '20 – Mar '20   **Facebook** – Software Engineering Intern   **Menlo Park, CA**
- Designed new system-wide interfaces and notification flows to enable relevancy- and permissions-based forwarding to a profile's assigned administrator roles for a major upcoming product release
- Collaborated with multiple teams to design these new features to fit well with existing infrastructures
- Implemented these additions on both the backend (Hack, GraphQL) and frontend (JavaScript) first using a mock API and switching to the real API upon completion. Also created extensive unit & integration tests
- Worked with the QA team on performing a notification audit to ensure intended product behavior

Sep '19 – Dec '19   **Xevo** – SDE I - AI UX (part-time)   **Bellevue, WA**
Jun '19 – Sep '19   – SDE Intern
- Worked on developing SQL / Python transformation scripts and jobs to transform raw user telemetry data into high-level trip / destination / POI info for use in predictive machine learning models
- Designed and implemented a Snowflake / AWS Kinesis pipeline to take processed telemetry data and determine user POIs via a reverse geocoding job running periodically on a Javascript Lambda
- Developed a DBSCAN-esque MySQL clustering algorithm to aggregate user data into high-order insights
- Engineered an in-house tool to visualize user telemetry data using Vue JS, React JS, Mapbox GL, and Python Flask and deployed to AWS using Docker / Kubernetes
- Gained expertise in other technologies including Terraform, Mixpanel, and more

Jun '18 – Sep '18   **Lime** – Software Engineering Intern   **San Francisco, CA**
- Led a complete redesign of the iOS app UI, unifying and simplifying the company design language
- Implemented a persistent rating system, increasing usage by 15% and enabling new performance metrics
- Refreshed the in-app referral system to use Branch.io deep links, increasing key user acquisition metrics
- Designed and programmed an in-trip zones interface, leading endpoint refactoring efforts to allow for warning users of potential fines that could be faced based on no-service and no-parking zones
- Led design and implementation efforts of a backend-driven animated 'how to ride' screen, allowing for per-region rules and regulations and helping the government relations team meet per-city requirements
- While interning at Lime, iOS ridership nearly doubled to over one million MAU

EXPERIENCE

Oct '17 – Mar '18   **Suplari** – Engineering Intern (part-time)   **Seattle, WA**
- Developed a card-based supplier database normalization iOS app to assist in ML model training
- Implemented an Auth0-based custom authentication system to mesh with existing sign in methods
- Developed an accompanying Python Flask-based Google Cloud endpoints backend for on-the-fly changes to categorization parameters and cloud storage/processing of normalization results

PROJECTS

Aug '17 – Present   **Weightlifting App** – iOS App Store
- Tracks and analyzes users' workouts using Amazon Web Services, Core Data, and more
- Developed a Node.js backend running on AWS EC2 for app leaderboards, feedback, user backups, etc.
- Contains multiple heuristic algorithms to gamify user progress via achievements and milestones
- Designed a Keras deep neural network (exported to CoreML) to predict user workout names
- 30k+ installs, 3k+ MAU, 4.7 star rated, top-10 weightlifting app

Aug '16 – Jan '19   **Homework App** – iOS App Store
- Organizes, keeps track of, and reminds users of upcoming homework assignments
- Acquired by Haystack AI on January 23rd, 2019
- Upon acquisition: 338k installs, 63k MAU, 4.7 star rated, #1 global homework app, top-60 productivity app

EDUCATION

2017 – 2021   **University of Washington**   **Seattle, WA**
Graduate at Paul Allen School of Computer Science & Foster School of Entrepreneurship Minor.
Courses include: CSE 331/2/3, CSE 401, CSE 440/6, CSE 452, CSE 473, ENTRE 459, ENTRE 472/3.
Graduated with *magna cum laude* honors – top 3.5% of class. Cumulative GPA: 3.87

2013 – 2017   **Thomas Jefferson High School for Science & Technology**   **Alexandria, VA**
Nationally ranked magnet school. Developed semi-autonomous go-kart in senior Automation & Robotics lab.
Courses include: AP CS (5), Artificial Intelligence I & II, Analog & Digital Electronics; ACT: 33, GPA: 4.3

SKILLS

- Programming capability in Objective C, Swift, JavaScript/TypeScript, Python, Java, C/C++, PHP/Hack, SQL, HTML/CSS
- Proficient with GitHub/GitLab/Bitbucket, Jira, Slack, Adobe CC (Photoshop, Illustrator), Google / Microsoft Office Suites
- Experience with AWS (S3, DynamoDB, Lambda, IAM etc.), GCP (Compute, Datastore, Endpoints etc.), Snowflake, Terraform
- Built two desktop computers – one Windows, one Hackintosh; added RAM and two SSDs in RAID 0 to old MacBook Pro

PERSONAL

- NBA, MLB, and NFL follower; Washington DC and Boston sports fan
- Completed Culpepper Cycling Century in 2016, Knott's Island Cycling Century in 2017
- Five-time Tough Mudder finisher: 10+ miles & 20+ obstacles built to test mental grit, teamwork & total physical fitness
- Four-year high school basketball player; senior year starting power forward, led team to regional tournament
- Completed ten-day Outward Bound rafting & mountaineering course building communication and leadership skills
- Brother at Delta Tau Delta – Gamma Mu chapter
- Avid weightlifter and nutritionist