# PRAMOD KOTIPALLI

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## SUMMARY

» Advocate of projects synthesizing work in AI, user-centered design, computer graphics, and psychology.
» Experienced with full-stack development and HCI research with a keen eye for UX + graphic design.
» Seeking full-time opportunities in UX design/research, AI research, or software engineering.

## EDUCATION

**Stanford University** *September 2019 - June 2021*
Masters of Science Computer Science · 2021
Depths: Human-Computer Interaction + Artificial Intelligence

**Georgia Institute of Technology** *August 2015 - August 2019*
*Bachelors of Science* · Computer Science · 2019
GPA: 3.83/4.00 (Faculty Honors: 4.00 GPA in Spring 2016, Summer 2016, Spring 2017, & Spring 2018 terms)
Coursework: Machine Learning, Data Structures, Algorithms, Assembly & C, Object-Oriented Programming

## EXPERIENCE

**Department of Genetics @ School of Medicine @ Stanford University** *Stanford, CA (remote)*
*Software Engineer · Part-time* *March 2020 - July 2020*
» Developed software for early detection of COVID-19 from wearable fitness trackers with 1,200+ users
» Implemented dependency injection (Dagger) for Android to enable instrumented integration tests
» Led development of iOS and Android features to streamline onboarding & improve data collection process
» Upcoming publication to *Nature Medicine* · More information: https://innovations.stanford.edu/wearables

**Space Exploration Technologies Corp. (SpaceX)** *Hawethorne, CA*
*Software Engineering Intern* *September 2017 - December 2017*
» Designed, implemented, tested software solutions · Worked closely with PMs and UX designers
» Automated supply chain processes in ERP: mitigated legal risk, increased business efficiency
» Engineered SQL Server + .NET/C# backend that exposed RESTful APIs to AngularJS front-end
» Saved 1,500+ hr/yr of manual data entry · Led projects now used by all 7,000 employees

**Cisco Systems** *San Jose, CA*
*Software Engineering Intern* *May 2017 - August 2017*
» Architected, researched, implemented test automation framework for Cisco's Cloud DVR services
» Developed load testing and analysis framework to generate HTTP traffic and collect relevant statistics
» Designed AngularJS front-end with Python RESTful API and ELK · Orchestrates Docker containers
» Saved 10+ hr/wk of manual and error-prone OS/network configuration · Increases engineer efficiency

**School of Interactive Computing @ Georgia Institute of Technology** *Atlanta, GA*
*Project Lead + Undergraduate Research Assistant* *January 2018 - August 2019*
» Developing and analyzing Augmented Reality applications for intelligent warehouse mgmt. systems
» Researching responsiveness to notifications on head-worn displays and wearable displays
» Developing Google Glass apps and Python APIs with Prof. Thad Starner, Contextual Computing Group
*Undergraduate Research Assistant* *January 2016 - December 2016*
» Developed predictive health analytics for heart disease patients with Professor James Rehg, Wall Lab
» Used MATLAB and Python to apply DSP + HMMs to on-body sensors to identify concerning behavior

**ATSDR @ U.S. Centers for Disease Control and Prevention (CDC)** *Atlanta, GA*
*Technical Consultant* *August 2018 - May 2019*
» Researched user requirements, architected, and delivered automated air quality analysis pipeline
» Drastically reduced time for publishing reports on air quality, assisting CDC in its public health missions
» Architected and developed desktop application to automate processing data from air quality sensors
» Worked closely with five other teammates to develop in an Agile method and produce demo videos

## AWARDS

**Best Paper** *Singapore*
*ACM International Symposium on Wearable Computers* *October 2018*
» Awarded for research work published to ACM International Symposium on Wearable Computers
» Studied novel wearable RFID-based verification system for the central process of order picking in logistics

**Grand Prize winner** *Emory University, Atlanta, GA*
*HackATL* *November 2016*
» Awarded for developing and presenting comprehensive business plan to Atlanta-area venture capitalists
» Developed wearable tech for on-demand community help in emergency situations on college campuses

**Microsoft Prize** *Emory University, Atlanta, GA*
*HackATL* *November 2016*
» Won 2nd place in Microsoft Prize category at HackATL, a tech startup hackathon at Emory University.
» Created hardware prototype for smart watches wearers to shake hands and connect online.

**Grace Hopper Conference travel grant** *Houston, TX*
*Google* *October 2016*
» 1 / 100 students awarded full scholarship to attend Grace Hopper Celebration of Women in Computing
» Developed skills based on demonstrated interest/experience in promoting the role of women in computing

# PUBLICATIONS

**RF-Pick: order picking using a HUD with wearable RFID verification**
*best paper @ ACM International Symposium on Wearable Computers* *January 2018 - October 2018*
Order picking accounts for 55% of the annual $60 billion spent on warehouse operations in the United States. Reducing human-induced errors in the order fulfillment process can save warehouses and distributors significant costs. We investigate a RFID-based verification method wherein wearable RFID scanners, worn on the wrists, scan passive RFID tags mounted on an item's bin as the item is picked; this method is used in conjunction with a head-up display (HUD) to guide the user to the correct item. We compare this RFID verification method to pick-to-light with button verification, pick-to-paper with barcode verification, and pick-to-paper with no verification. We find that pick-to-HUD with RFID verification enables significantly faster picking, provides the lowest error rate, and provides the lowest task workload.

# PROJECTS

**UX + Graphic + Motion Design (Freelance + Personal Projects)**
*personal explorations in animation, graphic design, and UX research* *December 2018 - present*
» Designed, animated, edited, and published over 40 short videos and 30+ high-quality static renders
» Demonstrates improving skills in animation, modeling, video production, sound mixing, and vector art
» Continuing to gain mastery of MAXON's Cinema 4D and Adobe's Creative Cloud products
» Portfolio continues to grow with new original work uploaded every week: https://instagram.com/p13i.io/

**Remembrance Agent**
*Library to display contextually-relevant notes based on keyboard input* *July 2019 - December 2019*
» Based on concept of a Remembrance Agent (RA) was first outlined by Rhodes and Starner in 1997
» Designed as system that automatically presents contextually-relevant notes, documents, and contacts
» Integrates with Google's Gmail, Drive, and Cloud Speech APIs through a Java Swing desktop GUI
» Logs keystrokes and ambient speech (through Google Cloud APIs) and searches offline cache

**Glass Notes for Google Glass**
*Android, web, and terminal applications to augment memory in class* *January 2019 - December 2019*
» Based on system designed by Thad Starner at MIT Media Lab in the late 1990s · redesigned for today
» Allows for offline note taking using Bluetooth keyboard · periodically syncs to GitHub Gists

**dARts**
*play darts in augmented reality* *May 2018*
» Designed interactive experience for collaborative darts game in augmented reality
» Used iOS frameworks like SceneKit to draw planes/objects into real-world with ARKit

**MetroSync**
*a web app to help musicians rehearse together* *May 2018*
» Designed/implemented web app featuring metronome synced across devices aiding in musical practice
» Developed real-time Web Socket-based app · Shared information between AngularJS front-end, REST API

**RichCaptions**
*symbolic math captions for educational videos* *September 2016*
» Designed/implemented UX for captioning and viewing videos with LaTeX-rendered math captions
» Developed AngularJS front-end leveraging YouTube API · Exposed Django REST API + PostgreSQL

# ACTIVITIES

**<gt-webdev/>** *January 2016 - December 2018*
*President, Officer, Technical Speaker* *College of Computing*
» Designed curriculum, lead weekly meetings, hosted one-on-one "office hours" for hundreds of students

# SKILLS

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|---|---|
| **PROGRAMMING LANGUAGES** | Python, JavaScript / TypeScript, C#, Swift, Java, Kotlin, MATLAB, HTML5 / CSS3, Shell, C / C++ |
| **DEVELOPMENT FRAMEWORKS** | .NET, iOS, Django + REST, Angular, Ionic, NodeJS, Android, Retrofit, Google Glass Development Kit (GDK), Dagger (Android dep. inject.) |
| **PACKAGING & DEPLOYMENT** | Vagrant, Docker, Heroku, Microsoft Azure, Digital Ocean, Gradle, NuGet |
| **CONTINUOUS INTEGRATION** | Git + Git Flow, Jenkins, Travis CI / CircleCI / Wercker / GitHub Actions |
| **DATABASES** | Microsoft SQL Server (T-SQL), PostgreSQL, Redis, MySQL |
| **MACHINE LEARNING** | hmm-learn, Digital Signal Processing, MATLAB, scikit-learn |
| **IDES & ENVIRONMENTS** | PyCharm, Visual Studio + ReSharper, IntelliJ IDEA, Android Studio |
| **GRAPHIC DESIGN & ANIMATION** | Sketch (macOS), Adobe (Illustrator, After Effects, Premiere Pro, Photoshop, Audition, InDesign), MAXON Cinema 4D, Octane Render, World Creator 2 (procedural landscape generation) |
| **HUMAN-COMPUTER INTERACTION** | UX Research, UI Design, Study Design (counter-balancing, dual-task, learning effects, etc.), Interview Design, Data Visualization, Statistics |
| **SOFTWARE ENGINEERING CONCEPTS** | RESTful API Design, Containerization, Virtualization, Distributed System Design, Message Queues / Task Queues, Micro-Service Design |

# PORTFOLIO

**Online portfolio:** http://portfolio.p13i.io/

**PDF portfolio:** http://pdf.portfolio.p13i.io/

**Technical writing:** http://writing.p13i.io/