

# Henry Trinh

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## Education

### University of California, Los Angeles

Bachelor of Science in Computer Science

Expected Graduation in June 2022

Major GPA: 3.9

**Courses** Data Structures, Algorithms, Operating Systems, Linear Algebra, Discrete Math, Software Construction Laboratory

## Experience

### Amazon

Software Development Engineer Intern

Seattle, WA

June 2020 - PRESENT

- Improved scalability and performance for a console's infrastructure by transferring it to serverless architecture
- Built new pipeline for automated, progressive deployments of certificate manager service with automatic rollbacks
- Implemented server logs and latency metrics using AWS CloudWatch

### Center for Vision, Cognition, Learning, and Autonomy

Research Assistant

Los Angeles, CA

April 2020 - PRESENT

- Researching deep learning under Professor Song-Chun Zhu for path planning and trajectory prediction in self-driving vehicles
- Developed LSTM neural network with social pooling to determine possible trajectories of human movement in dense crowds
- Created tool to preprocess raw data into loadable binary files, improving data pipeline performance

### Archanics

Software Engineer Intern

El Segundo, CA

June 2019 - August 2019

- Developed Android GIS/GPS map application with real-time traffic analysis and 3-D geographic layers
- Programmed mapping functionalities to generate routes, invite people to events, and display multiple datasets

### Daily Bruin

Lead Software Developer

Los Angeles, CA

April 2019 - June 2020

- Built database infrastructure and optimized database querying in API endpoints for multiple projects
- Constructed customizable components for the Daily Bruin Lux library, resulting in faster website development
- Increased number of average users by 10% by improving mobile user experience in new interactive flat pages

## Projects

### Simultaneous Location and Mapping (SLAM) Tool

- Developed tool to generate a three-dimensional map of an environment by analyzing any given video
- Performed video and image processing using OpenCV to extract features from images and render their points in 3-D space

### Tongits

- Implemented Android application of a Filipino card game with AI opponents, music, and point scoring
- Gained over **12,000 downloads on Google Play Store**

### Drug Decider

- Designed database schema and created REST API endpoints to connect the user interface with the machine learning model and database
- Fixed bugs in machine learning model for predicting a patient's treatment response to anti-psychotics
- Used in production by the UCLA David Geffen School of Medicine at **drugdecider.org**

## Skills

**Languages** Python, Java, C++, C, JavaScript, TypeScript, Go, HTML, CSS

**Frameworks + Tools** PyTorch, React, Django, Node, Git, Docker, OpenCV, MongoDB, MySQL, PostgreSQL, Numpy

**Technologies** Machine Learning, Deep Learning, Android, Computer Vision, SLAM, SQL, noSQL, Web Development