

# GAVIN WONG

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## EDUCATION

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### University of California, Los Angeles (UCLA)

Expected Jun 2024

*B.S Computer Science, Tech Management Breadth, Minor Entrepreneurship*

**Major GPA: 4.0/4.0**

- Coursework: Data Structures, Algorithms, Complexity Theory, Computer Organization, Software Construction, Linear Algebra, Discrete Math, Multivariable Calculus, Differential Equations, Logic Design, Probability/Statistics, Database/SQL, Networking
- Organizations: ACM (Cyber, AI, Hack), DataRes, Bruin Entrepreneurs, DevX, DSP, UPE

## WORK EXPERIENCES

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### UCLA - Surface Magnetic Assessment in Real Time [NSF Sponsored]

Los Angeles, CA

*Software/Data Visualization Lead*

Mar 2022 – Present

- Implementing historical and real-time data visualization via HighChart collected from 14 magnetometer stations across US
- Deploying web app using React.JS, Node.JS, Express with SMART data retrievals at different time intervals from Cloud SQL
- Improving structure of project website to have public access and education outreach for geomagnetism and SMART data

### SMount HealthTech Inc.

San Jose, CA

*Software Engineer Intern*

Jun 2021 – Sep 2021

- Developed Android health app with a team for virtual caretaking and monitoring conditions of seniors, helping 100+ families
- Designed dynamic scalability to include large networks of patients and doctors as opposed to a static amount previously
- Received approvals from elderlies for redefined UI of patient and doctor listings to appear more elegant and user-friendly

### SiliconData Security Inc.

Remote

*Software Engineer Intern*

July 2020 – Oct 2020

- Researched Generative Adversarial Networks (GAN) application for network intrusion detection using IEEE datasets
- Utilized Zeek within Ubuntu VM to convert PCAP files into Zeek logs with origin IP addresses, ports, bytes, and packets info
- Achieved average accuracy of 92.23% and published results and evaluations for GAN practicality in white paper

### San Jose State University

San Jose, CA

*Research Intern under Professor Mark Stamp*

Apr 2020 – Aug 2020

- Applied ensemble methods of bagging, stacking, and boosting to modernize ML and DL models for malware classification
- Processed 80GB of raw malware data and accomplished 15+ different experiments including CNNs, SVMs, KNNs, ANNs, MLPs
- Published results in a chapter within Springer textbook "Malware Analysis using Artificial Intelligence and Deep Learning"
- Achieved accuracy of 93.4%, balanced accuracy of 88.16%, precision score of 93.84%, recall score of 93.37%, F1 score of 93.13%

## PERSONAL PROJECTS

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### UCLA DevX - BruinBot

Oct 2021 – Present

- Online delivery-as-a-service system to deliver meals to UCLA students and community through autonomous wheeled bots
- Implementing delivery mapping and bot GPS features for user-facing mobile app using React Native and Node.js
- Constructing database models and server routing for location/path orchestration by utilizing AWS, Express, MongoDB

### Autodrone Delivery

Jan 2020 – Dec 2020

- Autonomous Drone delivery system designed for Covid-19 to provide contact-free deliveries and lower traffic congestion
- Devised navigation speed and steering models through CNN-LSTM model and displayed drone real-time location status
- Utilized Cloud Firestore to design iOS app that provides product listings, online purchasing, delivery processing and statuses

### GeomHacks (<https://geomhacks.com/>)

Mar 2020 – Aug 2020

- Co-founded online hackathon and led a team of 12 people to empower students to create impactful project amidst Covid-19
- Designed website and outreach material and hosted 6 workshops to provide novel tools and frameworks students can use
- Secured ~\$100,000 funding from 15+ sponsors (e.g Github, HyperX) and ~250 attendees from 10+ different countries

### Race Global

June 2019 – Apr 2020

- iOS app simulating real-time virtual races between runners at different locations and on App Store with 800+ downloads
- Incorporated Core Location Manager and Firebase Database for GPS tracking and geocode regulation between devices
- Established lobby and queue system management and displays for immediate location mappings and race statistics

## SKILLS, INTERESTS, AND AWARDS

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**Skills:** Java, C++, Python, Swift, Javascript, SQL, HTML/CSS, Tensorflow, Pytorch, React/Node, Git, AWS/Cloud SQL, Vim, Linux

**Interests:** Basketball, Tennis, Piano/Sing, Breakdancing, Anime, Valorant, Playing with my dog, Watching NBA, Gym

**Awards:** USACO Gold, 1st Place at Hack The Helyx, 2nd Place at Community Hacks, Presidential Volunteer Service Gold