

Roger Ji

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EDUCATION

University of Texas at Austin | Computer Science *Sep 2019 - May 2024*

- Accepted into Turing Scholars Honors Program.
- Intend to pursue 5-year integrated BS/MS in CS.

Henry M. Gunn Senior High School *Aug 2015 - May 2019*

- 4.0/4.5 GPA (top 5%), 1550 SAT, 1500 PSAT, 14 APs.
- National AP Scholar, USA Biology Olympiad Semifinalist. National German Exam Silver, National Merit Finalist.

INTERSHIPS

fortissimo *15hrs/wk | 24 wks/yr 11, 12*

Full Stack Developer Intern

- Helped expand SaaS startup from concept to near-reality.
- Employed Adobe XD to create 20+ wireframes for site framework; teamed with other interns to flesh out design specifics.
- Utilized background web dev knowledge (HTML, CSS, JS) and new learnings (chiefly React) to implement pages boasting sleek, interactive UI.
- Absorbed legal and financial insight associated with growing a tech startup.

Stanford Institute for Immunity, Transplantation and Infection

Bioinformatics Intern 40hrs/wk | 6wks/yr 10, 12 (smrs)

- Used Biopython and R to program scripts capable of efficiently extracting and analyzing 15+ GB of data outputted by DNA sequencers.
- Integrated above algorithms with existing ones to form large, scalable genomic pipelines further streamlining the data interpretation procedure.
- Other tasks include standard research lab procedures: operating PCR machines, pipetting samples, prepping centrifuges, performing experiments, etc.
- Fostered professional workplace skills, etiquettes, and lifelong friendships.

clickPA *4hrs/wk | 30 wks/yr 10, 11*

Event Planner

- Brought together leadership from Teen Arts Council, PA Youth Council, and Teen Advisory Board to execute large, bimonthly festivities drawing 100+ participants.
- Reached out to local companies such as VMware to sponsor such events.
- Took initiative in devising a city-wide scavenger hunt aiming to motivate students to explore what Palo Alto has to offer.

ENRICHMENT

NextGen AI

3hrs/wk | 24wks/yr 11, 12 (smr)

- Attended free course funded by City of Palo Alto on artificial intelligence.
- Solidified foundational knowledge while exploring new topics like logistic regression, deconvolutional neural networks, and generative adversarial networks.
- Gained familiarity with PyTorch (as opposed to familiarity with just TensorFlow)

BeaverWorks Summer Institute

60hrs/wk | 4wks/yr 11 (smr)

CogWorks 2017

- Selective, all-expenses-paid summer camp on machine learning hosted by MIT.
- Delved into theory and NumPy implementation behind CNNs, RNNs, language models, data classification, reinforcement learning, and unsupervised learning.
- Coded Shakespeare bot capable of generating fake plays; developed crude summarizer that condensed Wikipedia articles; trained a search engine algorithm; created facial recognition software supporting group photos.
- Snagged 3rd place in final competition (build a cognitive assistant); judges praised ours on qualities such as ease of use, response times, and NLP abilities.

EXTRACURRICULARS

Gunn Zero Robotics Team

12hrs/wk | 16 wks/yr 11, 12

Efficiency Lead (Elected)

- Compete against teams nationwide to formulate the “smartest” decision-making algorithm for virtual satellites, given a set of parameters and obstacles to navigate.
- Tasked with reducing fuel expenditures; achieve that goal by leading my group to determine the path of least resistance using rotational physics and linear algebra.
- Past challenges include using C++ to instruct the satellite to extract ice samples from Enceladus, tow another satellite, and pick up scattered supplies.

Amazon Alexa

6hrs/wk | 10wks/yr 10, 11, 12

Freelance Developer

- Leverage Python, AWS Lambda, Alexa Skills Kit, and various programming forums to craft niche voice commands for my Amazon Echo.
- Link to video demonstrating selected skills: <https://goo.gl/wWF1zT>.
- This activity is strictly a pastime; I am NOT employed by Amazon.

Gunn Engineering Club

3hrs/wk | 32 wks/yr 11, 12

Secretary (Elected)

- The club motto aptly reflects our goal: “we build stuff.”
- Oversaw construction of miniature mechanical arm and electronic billboard last year; currently working to assemble a Raspberry Pi rover.
- Among others, offer short lectures about Git basics and troubleshooting bugs.
- Frequently huddle with Treasurer to lobby for grants from entrepreneurship funds.