Cooper Collier

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Experience

- [2020—2021] Volunteer Research Assistant in Thomas Nowakowski's Developmental Neurobiology Lab at UCSF. I analyzed genomic single-cell sequencing data by using machine learning in Python and R. Lab website: https://nowakowski-lab.squarespace.com.
- [2019—Ongoing] Member of UC Berkeley's competitive student rocketry team (website: https://stars.berkeley.edu). I help design and program flight computers as part of the avionics sub-team.
- [2018] Accepted for a volunteer research assistant position at the Gary Steinberg Neuroscience Lab of Stanford Medical School. I produced a 3,000-word neuroscience literature review (with proposed experiment) on Perineuronal Nets for the researchers. (My involvement in the lab was thereafter cut short due to my impending enrollment at UC Berkeley.)

Technical Skills & Projects

- [2017–2020] Programming languages known: Python, C, Java, C#, Golang, R, SQL.
- [2020] Programmed (with extensive documentation) a graphing calculator from scratch. Over 600 lines of C. The calculator is interactive and handles text-based user input with a behind-the-scenes parsing tree. The finished graphs can be moved and rescaled.
  Link to project: https://github.com/CooperCollier/ASCII_Graphing_Calculator
- [2020] Programmed an encrypted file-sharing system that allows the user to perform public-key exchanges and share files securely with other users. Over 1500 lines of Golang. Project description: https://cs161.org/assets/projects/2/docs/index.html
- [2020] Programmed a smaller version of Git for a class project, receiving an A+ grade. Over 1500 lines of Java. Project description: https://inst.eecs.berkeley.edu/~cs61b/sp20/materials/proj/proj3/index.html
- [2019-2020] Gained experience with Adobe Photoshop, Microsoft Office, LaTeX and KiCad.

Nontechnical Skills & Projects

- [2018] Published 2 popular-science articles on neuroscience: one in the nationwide Mensa Bulletin (official magazine of American Mensa), and one in the the Bay Area Mensa Magazine (over 300 readers). With both of these articles, I strengthened skills in independent research and writing.
- [2017—Ongoing] I volunteer as the Staff Cartoonist for the Bay Area Regional Mensa magazine, and contribute several cartoons each month. I previously volunteered as the Staff Cartoonist for the nationwide Young Mensan Magazine. (https://www.us.mensa.org/read/young-mensan-magazine/). I gained enhanced teamwork skills from working as a staff member on both magazines.
- [2017] Published my first full-length novel on iBooks (title: "Moon Rocks", of the sci-fi genre). I am currently working on my next one. In the process, I gained skills in writing clearly and creatively.

Education

- [09/2018—05/2022] **University Of California Berkeley**
  - Degree In Progress: Bachelor of Arts in Computer Science & Applied Math (double major)
  - GPA: 3.7
- [2018—2020] Relevant coursework from UC Berkeley: C Programming (CS61C), Multivariable Calculus (MATH53), Computer Security (CS161), Java Programming (CS61B), Electrical Circuit Design (EE16B), Linear Algebra & Differential Equations (MATH54), Python Programming (CS61A).
- [2019] Completed "Introduction To Cybersecurity" from UC Berkeley Extension, with an A+ grade.