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Education

Harvey Mudd College (Claremont, CA) — Aug. 2017–(May 2021)
B.S., undeclared major (probably Mathematics & Computer Science)
Harvey S. Mudd Merit Scholarship recipient (2017-2021)
Relevant coursework:
- Principles & Practice of Computer Science (2017 Fall)
- Multivariable Calculus (2017 Fall)
- Computability & Logic (2018 Spring, not yet completed)

Monte Vista Christian School (Watsonville, CA) — Aug. 2014–May 2017
Salutatorian, GPA 4.5 (unweighted 4.0)
Relevant coursework:
- Digital Electronics (2016 Fall–2017 Spring)

Skills

Languages
Proficient: Python, LaTeX
Competent: Go, Bash, Javascript, HTML/CSS
Basically familiar: Java, Rust, C/C++, Swift

Software/Hardware
- Arch Linux (personal use and server administration)
- OpenSCAD (2D/3D CAD programming language)
- Arduino (basic circuit design and programming)
- Raspberry Pi (mini home servers)
- 3D printers (maintenance, debugging, and software setup)

Projects

Totem: Table of the Elements (iOS app) — Sep.–Nov. 2014
- Developed a periodic table app that provides a comprehensive database of physical/chemical/atomic properties about the chemical elements
- Over 3K downloads from users in U.S., Canada, Philippines, Thailand, and U.K.

Relevant skills:
- Data collection: manually cross-checked and tabulated data from several websites into Excel CSV
- Data processing/conversion: wrote Python scripts to convert CSV into iOS-compatible P-lists
- UI design: designed table layout and button controls to be minimalistic and visually elegant but also straightforward and intuitive

Research

Yale Summer Program in Astrophysics (YSPA) (New Haven, CT) — Jul.–Aug. 2016
- Undertook college-equivalent coursework in astronomical physics (astronomy, orbital mechanics)
- Collected and analyzed data on asteroid "1999ML" to predict potential future collisions with Earth

Relevant skills:
- Astronomical data collection: operated computerized telescope to collect image data
- Data analysis: performed image filtering/reduction and star detection using Python NumPy, SciPy, and AstroPy libraries
- Data regression via basic genetic evolution: used Gauss and Lagrange methods to estimate asteroid orbit parameters, and "evolved" parameters to improve data fit
- Numerical integration: implemented numerical integration algorithms (RK4) and used Python REBOUND library to simulate asteroid orbits and predict potential Earth collisions

Leadership

Unpaid tutoring — 2015–Present
Volunteered to tutor high school peers in physics, economics, and math
Accomplishments:
- Significantly improved a near-failing senior's grades (10^{th} grade)
- Helped a junior struggling in math score a 5 on the AP Calculus AB test (11^{th} grade)

VEX robotics competition (High school) — Sep. 2016–Feb. 2017
Collaborated with team of three to devise and implement robot design
Spearheaded programming for robot remote-control and autonomous algorithms
Placed third in Livermore regionals competition (2017)

Achievements

U.S. National Physics Olympiad Gold medal — Apr. 2016, 2017

International Physics Olympiad U.S. team traveler (one of five); Gold medal — Jul. 2017

ACM Intercollegiate Programming Competition (ICPC) Southern California regional competition; 11^{th} place (team of three) — Nov. 2017