Ibraheem Khan

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PROFILE

Sophomore-year Math and Physics undergraduate with 4+ years of accomplished competitive and academic experience in open-ended problem solving and technical analysis via CAD software, C++, SageMath, and laboratory tools at large. Excellent communicator with skills in LaTeX and a driven interest in the field.

EDUCATION

B.S. University of Nevada, Reno - Reno, NV GPA: 3.65 *Expected May 2021*
Pure Mathematics and Physics, minor in Computer Science

TECHNICAL SKILLS

Programming Experience:

- General: C++ (w/ openCV), Java, & C
- Science: Python (scipy, numpy), SageMath
- Markup: HTML & CSS, LaTeX
- OS & Net: Debian, Tor/I2P, GPG/PGP

Skills & Expertise:

- Autodesk Inventor, KICAD, Fusion 360
- MySQL (implemented Sphider search)
- UpSquared, Raspberry Pi, and Arduino
- Oscilloscopes, PCB development, circuitry

WORK & PROJECT EXPERIENCE

Safecracking (International Shalhevet Freier Physics Tournament), Rancho High School
Mathematician ('15-'16) and Captain ('16-'17) *August 2015 - May 2017*

- Helped develop and mathematically analyze Faraday Waves and pseudo-Colorimeter
- Competed in Israel and developed Ferrofluid/Function Generator puzzles, presented at conferences

Engineering Department, University of Nevada Las Vegas
Intern *January 2017 - June 2017*

- Worked on a weather balloon and UAV-heavy project to assess the climate via SODAR data

Senior Science Projects, Rancho High School
Student *January 2017- June 2017*

- Wrote nationally awarded business & CAD models for UAV at Real World Design Challenge
- Created a Plasma Arc (Vortex) Speaker and created Rasp. Pi-based weather balloon w/ custom GPS

Great Basin Observatory, University of Nevada Reno
Student Associate *December 2017- ongoing*

- Working with UNR students on Exoplanet Transit Photometry to develop light curves

EXTRACURRICULAR ENGAGEMENTS

Robotics and Electronics Club, University of Nevada, Reno
President *January 18 - now*

- Founded the club to fund student electronic projects and represent the University at Makers Faire
- Currently ongoing projects in visual recognition w/openCV and weather balloons

AWARDS AND ACHIEVEMENTS

- Questbridge Finalist and Bruce Fishkins Semi-Finalist *February 2017*
- 1st Place Math Kangaroo Level 12 and Top 50% Putnam Math Competition *2013, February 2018*

WRITE-UPS

- Infinite Sets [https://pikhan.github.io/Infset.pdf] *December 2017*
- Advanced Calculus (in Production) [https://pikhan.github.io/Advanced_Calculus.pdf] *'17-ongoing*