Jacob Melonis

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(303) 720-9859

Strengths

Adaptable | Analytical | Articulate | Cooperative | Communicator | Dedicated | Efficient | Hard Working | Innovative | Leader | Organized | Proactive | Strategic | Thorough

Technical Skills

Amazon Alexa | Circuit Design | Eclipse | Arduino | FPGA | Git | Illustrator | Laser Cutting | Mathematica | Linux | Microsoft Suite | MATLAB | SFTP | Photoshop | Presenting | Soldering

Programming Languages

Angular | Assembly | Bash | C/C++ | CSS | HTML | Java | Javascript | jQuery | LaTeX | MySQL | NodeJS | PHP | Python | Spice | Verilog

Interests

Antimatter | Black Holes | Dark Matter | Galaxy Formation | Nuclear Physics | Optics | Satellites | Star Composition | Star Formation | Planetary Atmospheres | Quantum Computation

Education

University of Colorado Boulder

Graduation Date: May 2019
Cumulative GPA: 3.836

» B.A. Astrophysics
» B.S. Electrical and Computer Engineering

Professional Experience

Arrow Electronics Inc.
Jun 2017- Aug 2017

Applications Engineering Intern

» Designed fully functional IoT network for maximizing office and warehouse productivity by monitoring the environment of the facility
» Developed solutions to mimimize trash waste in the company through real-time trash production monitoring

Fiske Planetarium
Jan 2017- Present

Presenter, Program Developer and A/V Expert

» Designed and presented custom shows to the public about science fiction realism
» Worked with other team members to create mind blowing audio and visual effects
» Operated proprietary Digital Sky II planetarium software to inspire and educate audiences of all ages to the beauty of the unverse around us

University of Colorado Boulder
Aug 2016- May 2017

Optical Experimentation Facilitator

» Utilized an argon-ion laser to devise an affordable method for super resolution lithography
» Developed chemical photoresists and developers to minimize interference line spacing
» Designed graphical user interface to autonomously run experiment and calculate results
» Operated scanning electron microscope to view high resolution images of samples

DN2K
Jan 2016- Aug 2016

Software Engineering Intern

» Wrote Jasmine unit tests on existing modules of the application to develop its sustainability
» Collaborated to develop an effective plan of implementation for Spring Security
» Designed contact form to submit client data to MailChimp and Salesforce databases to improve unification of user experience

Assistive Technology Partners
Nov 2014 - May 2017

Webmaster

» Improved web pages to create a more intuitive and effective online environment
» Re-organized and digitalized filing and records system
» Increased program efficiency through collaboration on department projects

ETH Zürich
June 2014 - July 2014

Research Assistant

» Formulated hypotheses with team regarding expected behavior of radiation pressure
» Iterated data trials with He-Ne laser and crystal tuning fork
» Organized data and performed calculations to develop conclusions for publication

Honors and Awards

Boettcher Alternate | Valedictorian HRHS | National AP Scholar | Eagle Scout | Engineering Honors Program