Cooper Howlett

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Profile:

Energetic and dependable engineer with a wide range of experience in enterprise software engineering, web-development, and scientific computing. I have strong communication skills as well as practiced leadership skills with an extensive background in software engineering.

Skills:

- **Software engineering** experience with Python, C, and C++, along with experience in GUI development.
- **Web development** experience with JavaScript, NodeJS, Ajax, Python-Flask, PHP, HTML5, CSS, and restful methodology.
- Image recognition and processing, computer vision, and mathematical modeling with low signal to noise ratio data.

Education:

University of Hawaii Hilo Hilo, Hawaii

Bachelor of Arts in Physics, GPA: 3.78/4.0 2015 to 2018

- Two years of applied physics experience including coursework and projects as well as research in computational physics using Python and Mathematica, as well as software projects using C and C++.
- Course and lab experience in Computational Physics, Electromagnetics, Condensed Matter/Solid State Physics, Fluid Dynamics, Optics, Thermodynamics, Quantum Mechanics, Electrical Engineering, and Classical Mechanics.

Work Experience:

Mantle Remote, Hawaii

Consultant, Part-Time June 2019 to **Current**

- Developed web-services build using JavaScript, NodeJS, PHP, and HTML5.
- Improved and maintained WordPress based client websites.

NiyamIT Inc Remote, Virginia

Information Technology Specialist, Full-Time October 2018 to **Current**

- Heavy use of Python with Flask, GDAL/OGR, numpy, tkinter, and ArcGIS/ArcPY packages.
- Transition FEMA-HAZUS flood-modeling scripts from licensed ArcGIS software to open-source QGIS systems.
- Development of GUI based enterprise software for HAZUS flood modeling.
- Built a restful web-service using Flask interface with JavaScript, PHP, and HTML5.

Pacific Disaster Center Remote, Hawaii

Jr Disaster Risk Analyst, Part-Time March 2018 to **Current**

Software Engineering Intern in Applied Sciences, Part-Time June 2018 to February 2019

- Heavy use of Python with ArcGIS/ArcPY, numpy, and MySQL for databases, as well as Powershell for automation.
- Created automated and GUI based software simulation for testing hazard models with
- Tasks included debugging, documenting, and optimizing automated disaster models in Python.
- Developed restful web-service in Flask using Python, PHP, and HTML5 for automated web-based disaster models.

National Solar Observatory Pukalani, Hawaii

Research Assistant, Part-Time October 2018 to August 2019

- Heavy use of Python with numpy, sunpy, astropy, OpenCV, and scikit.
- Designed and created models for analysis of granulation of sunspots from NASA telescope data.
- Analyzed and Digitized historical sunspot telescope data by using image recognition techniques.

Projects:

- **Open-Source Flood Modeling:** Built in Python with GDAL, numpy, pandas, geopandas. Remade without use of expensive licensed software. Includes intuitive dynamic GUI. Increased speed by 20 times vs original: github.com/nhrap-dev/FAST
- **Online Checkers Game:** Based in JavaScript and PHP with HTML5 canvas for the interface and AJAX for live playing: github.com/cbhowlett/JSCheckers