Caleb M. Vatral

SOFTWARE ENGINEER

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Professional Summary

Self-motivated and team oriented individual, who uses a blend of a broad set of academic and technical skills in physics, math, engineering and computer science combined with experience in applied research, software development, and management toward solving real world problems and improving human lives.

Education

Eastern Nazarene College   *Quincy, MA*

B.S. IN COMPUTER SCIENCE AND MATHEMATICS   *Aug. 2015 - PRESENT*

- GPA: 4.0, Expected Graduation: May 2019

Employment

Advanced Lab Manager   *Quincy, MA*

DEPARTMENT OF PHYSICS AND ENGINEERING, EASTERN NAZARENE COLLEGE   *Aug. 2017 - PRESENT*

- Assisted professors in overseeing daily operation in the lab including managing all lab sessions, overseeing all teaching assistants, and facilitating active research projects

Research Assistant   *Quincy, MA*

DEPARTMENT OF PHYSICS AND ENGINEERING, EASTERN NAZARENE COLLEGE   *Jun. 2016 - PRESENT*

- Joined with faculty and other students to continue ongoing research in earthquake forecasting full-time during two 10-week summer programs, and part-time during the school year
- Promoted to student manager during summer 2017 research program

Peer Tutor   *Quincy, MA*

CENTER FOR ACADEMIC SUCCESS, EASTERN NAZARENE COLLEGE   *Aug. 2016 - PRESENT*

- Tutored ENC students in coursework for math and physics classes for a variety of skill levels ranging from elementary level to university sophomore level classes
- Promoted to Senior Tutor in Aug. 2017

Help Desk Assistant   *Quincy, MA*

INFORMATION TECHNOLOGY SERVICES, EASTERN NAZARENE COLLEGE   *Oct. 2015 - Oct. 2017*

- Worked closely with students and staff at Eastern Nazarene College to help solve a variety of personal and departmental technology issues and ensure technology availability and usability for community members

Technical Experience

Data Acquisition Platform	A debian-based microcomputer platform with a Python daemon to collect data from remote locations and transmit to a time-series database on a harded CentOS server for later analysis
Piezo-Magnetic Simulation	A MATLAB simulation of the piezo-magnetic effects due to large magnitude earthquakes as computed in Sasai (1980)
Magnetic Field Sensor	Designed and tested a low magnitude fluxgate magnetic field sensor for use with measuring disturbances associated with pre-earthquake signals
Subnet Calculator	A HTML and PHP web application to subnet IPv4 networks and get information about specific subnets

Technical Skills

Proficient	C++, Java, Responsive Web using W3.CSS, Debian and CentOS Linux, Git/Github
Experienced	Python, MATLAB, PHP, mySQL, InfluxDB, LaTex

Recent Coursework

C++ Programming 2	Intermediate/Advanced topics in C++ development including object oriented programming and introduction to data structures
Introduction to Networks	Topics in telecommunications including TCP/IP model, OSI model, subnetting, routing, and switching