Benjamin A. Montgomery

6 Brydon Way, Westbrook, Maine 04092

(207) 776-4980 | ben_mon@outlook.com | Nyctanthous

Education

University of Southern Maine *Portland, Maine*

B.S. in Computer Science, Minor in Physics: 3.9 GPA *Fall 2014 - Fall 2018*

- COS 485: Design and Analysis of Algorithms
- COS 475: Machine Learning
- COS 460: Computer Networks
- COS 457: Database Systems
- COS 450: Operating Systems
- COS 420: Object-Oriented Design
- COS 360: Programming Languages
- COS 350: Systems Programming
- MAT 492: Graph Theory and Combinatorics
- PHY 410: Independent Study: Magnetic Torsion Pendulum

Skills

Programming C, Java, Python, LaTeX. *Some C#, C++, Bash, and PostgreSQL*

Tools Eclipse, MonoDevelop, PyCharm, Atom, VS Code, Jupyter, Git, Travis-CI

Experience

University of Southern Maine *Portland, Maine*

Research Assistant *April 2016 – June 2018*

- Developed a Python-based machine vision project pipeline designed to dynamically analyze Brownian motion in order to find Boltzmann's constant with high precision.
- Developed software to calculate phase corrections for asteroids found in the Sloan Digital Sky Survey.

University of Southern Maine *Portland, Maine*

Developer *April 2016 – May 2017*

- Lead developer in NASA-sponsored project devoted to simulating light waves reflected by rotating objects in space.
- Focus was given to writing code such that that new or learning students would be able to extend program functionality.
- Primarily written using C and C++ using Unity and Unreal Engine, respectively.
- Work was presented at multiple conferences with verbal and written presentations.

Honors, Honor Societies, and Awards

2014-2018	**Dean's List, Spring and Fall**	*USM*
2014-2018	**Dirigo Scholar Award**	*USM*
2018	**Phi Kappa Phi Membership**	*USM*
2016	**Michael E. Dubyak Scholarship**	*USM*

Public Presentations

Mar. 2019	**Subtleties in the use of a quadrant cell photodiode in an optical lever**	*APS*
Mar. 2019	**Effective Realtime Data Processing using LabJack T-Series DAQs**	*APS*
Apr. 2018	**Improving Utility of the Sloan Digital Sky Survey Asteroid Database by Analyzing Reliability and Error**	*Thinking Matters*

Extracurricular Activity

labjack-controller

Lead Developer *Summer 2018*

Open-source thin API for streaming data from Labjack T4 and T7 DAQs.