

Matthew Dutson

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Education

University of Wisconsin-Madison

MS/PhD in Computer Science

- Interests: Computer vision, graphics, machine learning

Madison, Wisconsin

Fall 2018 - Present

University of Utah

Honors Bachelor of Science in Physics

- Magnum cum laude
- Minors: Computer science, mathematics
- Thesis: Reconstruction of Cosmic Ray Geometry Using Cherenkov Backscattering

Salt Lake City, Utah

Fall 2013 - Spring 2018

Coursework and Languages

Selected coursework Machine learning, artificial intelligence, computer graphics, algorithms, scientific computing, linear algebra, statistics, differential equations

Most experience C++, Python, Java, Rust

Some experience C, C#, Perl, JavaScript, LaTeX, Linux/UNIX

Work Experience

Esri

Map Exploration Software Intern

- Created tools for high-performance visibility analysis in ArcGIS Pro.
- Leveraged machine learning for detecting objects in 3D urban scenes.

Redlands, California

Summer 2019

UW-Madison Computer Sciences

Graduate Research Assistant

- Collaborator on Hustle, a scalable replacement for SQLite written in Rust.
- Wrote a Java application to generate synthetic images of biological fiber networks.

Madison, Wisconsin

Fall 2018 - Spring 2019

University of Utah Physics & Astronomy

Undergraduate Research Assistant

- Conducted research on atmospheric cosmic ray detection techniques.
- Operated the Telescope Array observatory in Delta, Utah.

Salt Lake City, Utah

Spring 2016 - Summer 2018

University of Utah School of Computing

Teaching Assistant

- Course: CS 2100 - Discrete Mathematics
- Responsible for leading weekly discussions and creating homework solutions.

Salt Lake City, Utah

Fall 2017

IM Flash Technologies

Process Software Intern

- Wrote Perl scripts to improve the efficiency of manufacturing defect sourcing.
- Improved existing software to reduce errors in process time estimation by 97 percent.
- Built a C++ computer vision application for detecting equipment malfunctions.

Lehi, Utah

Summer 2016, Summer 2017