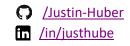
Justin Huber

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EDUCATION

University of Michigan

B.S.E. in Data Science Engineering B.S.E. in Chemical Engineering

GPA: 3.50/4.00

Ann Arbor, MI

Sep 2018 – May 2019 Sep 2015 – May 2018 **RWTH Aachen University** Study & Research Abroad Aachen, Germany May - Aug 2016

PROJECT EXPERIENCE

Open Source Contributor — *SciKit Learn*

Apr 2020 – Present

- Contribute backend production code (Python, Cython) to SciKit Learn which has a monthly userbase over 600,000
- Write statistical testing to ensure stability of a random number generator across differing systems

Data Scientist Project Lead — *Computer Vision Senior Thesis* Jan – May 2019

- Led a team of 4 in creating a parallelized Structure from Motion pipeline taking a set of images of a scene and creating a 3D representation using Machine Learning and Computer Vision techniques (Feature Extraction, Reduction and Matching, Geometric Verification) and Python (OpenCV, SciKit Learn, Numpy)
- Trained team on the use of the previously named packages
- Improved upon an existing Python implementation of a similar Structure from Motion pipeline resulting in a 30% decrease in pipeline runtime

Software Engineer Project Lead — OS Course Projects Sep – Dec 2018

- Led a team of 3 in completing 3 projects over the span of 4 months
- Projects included implementing a thread library, a pager, and a network file server, all in C++
- Trained team on the use of Makefiles, Git, and the C++ STL
- Created automated test suites for all 3 projects using C++ and Makefiles

LEADERSHIP EXPERIENCE

<u>Arbor Esports</u> — Competitive Gaming Director

Organized tournaments, viewing events, and socials for e-sport events attended by hundreds

<u>BLUElab Biogas International</u> — *Team Lead*

Led design of a gas detection system using Arduino to detect levels of hydrogen sulfide, methane, and water in biogas production for rural farmers in Mexico

SKILLS

Computer Languages: Python, C++, C, Java, Make, HTML, SQL,

JavaScript

Human Languages: German (B2), Spanish (B2), Japanese (N5) **Computer Skills:** Git, Bash, LaTeX, Vim, Visual Studio, PyCharm,

IntelliJ, Microsoft Office, Google Drive Suite **Platforms:** Linux (Ubuntu), Windows

Computational Research Assistant — *Prof. Mayes Lab* May – Aug 2018

- Developed a program for reducing high dimensionality proteins into their most important features to optimize the computation needed in the comparison process for researchers
- Used likelihood maximization for parameter estimation to define the model and compared between models using BIC
- Implemented a theoretical research paper's method first in C and finally in Python using Numpy, Scipy, and SciKit Learn
- Designed the program to be parallelizable for efficient running on computational clusters using multithreading within Python

May - Aug 2017

- Explored the viability of a set of quantum mechanic (QM) computational methods for simulating sugars to help researchers narrow down selection of tools when solving QM problems
- Used Python (Numpy, Scipy, Matplotlib, and Pandas) to develop a modified k-means clustering algorithm to selectively group QM simulated sugars based on structure
- Used Python, VBA, and Bash to generate a pipeline for systematically clustering, visualizing, and analyzing simulation data of sugars

Computational Research Assistant — *Prof. Mitsos Lab* May – Aug 2016

 Using C++, Aspen, the NRTL thermodynamic model, and the GAMS programming language, modelled chemical engineering equipment for use in prescreening solvents to determine viability for use in fuels by comparing calculation time, accuracy, and efficiency

<u>International Buddy Program — Mentor</u>

Helped international students overcome culture shock by assisting their move-in and helping them socialize

Boy Scouts of America — Eagle Scout

Made the rank of Eagle Scout after 10 years in the organization and leading the construction of a 40 ft pedestrian bridge

| RELEVANT COURSES | HOBBIES |
|-------------------------|--------------------|
| Machine Learning | Gaming/DnD |
| Operating Systems | Traveling |
| Web Systems | Learning Languages |
| Computer Vision | Drawing |
| Artificial Intelligence | Backpacking |