Oliver Adams

Portfolio: oliver-adams-b.github.io
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Summary

Computer science graduate student from Maine with 5+ years of professional experience in data science, research, computer vision, AI and statistics. Moving forward with a strong academic background in Math, Physics, and engineering. Eager to be a part of a motivated team of curious and excited engineers.

Education

Northeastern University, Roux Institute — Portland, Maine
Masters of Science in Computer Science — *2021 – Present*

University of Maine, Orono, *magna cum laude* — Orono, Maine
Bachelors of Arts in Physics, Double Major in Mathematics — *2015 – 2019*
Sigma Pi Sigma (*Physics Honors*), *Mu Alpha Theta* (*Math Honors*), *Presidential Scholar*

American University of Bulgaria — Blagoevgrad, Bulgaria
Semester Abroad Study in Mathematics — *Fall 2017*

Maine School of Science and Mathematics — Limestone, Maine
High School Diploma — *2013-2015*

Experience

Ushur — Remote; Portland, Maine
Data Science Intern — *Jan' 2021 – Aug' 2021*
- Designed and implemented computer vision models for efficiently processing insurance documents in an unsupervised manner using python.
- Coordinated wth a global team of engineers to improve accuracy of Ushur's data processing pipeline.
- Deployed custom models onto API hosted on GCP for use globally.

Earth Species Project — Remote; Portland, Maine
Volunteer Open Source Collaborator — *Aug' 2020 – Dec' 2020*
- Adapted research-grade language and vision models to translate Egyptian fruit bat noises into English using fastai/pytorch on GCP's AI Platform.
- Created a custom model architecture which greatly outperformed on benchmark classification tasks.
- Collaborated with a global team of open source developers and researchers.

Sylebra Capital — Wan Chai, Hong Kong
Data Scientist and Quantitative Fundamental Researcher — *Aug' 2019 – Feb' 2020*
- Performed research and analysis under the direction of the funds' lead investor.
- Implemented models which thinned the investible universe, allowing for a more efficient selection of potential portfolio candidates.
- Webscraped terabytes of historical metrics for a large universe of stocks, and maintained a custom SQL database.

Muuse, fomerly revolv — Bali, Indonesia & Hong Kong
Chief Technology Officer — *Nov'2018 – June 2019*
- Designed and managed the production of the beta version for a technological ecosystem which facilitated the circular reuse of cups, circumventing the need for single use waste.
- Winner of the OpenIDEO NextGen Cup Challenge, secured partnership with McDonalds and Starbucks.

Frontier Institute for Research in Sensor Technologies — Orono, Maine
Undergraduate Research Fellow — *Summer 2018*
- Conducted research on modeling particle separation in a fixed volume filled with fluid using surface acoustic waves.
- This work focuses on the analysis of the fluid dynamics and multiphysics phenomena inside a sessile droplet, which may contain particles from diverse sizes, shapes, and/or densities, as excited by an array of surface acoustic wave devices

Undergraduate Research Fellow *Summer 2017*

- An Investigation on flow-driven microfluidic mixers for the production of silver nanoparticles
- Via in-situ testing and computational modeling, I advanced the design of a microfluidic mixer for the purposes of producing monodisperse nanoparticles

Advanced Structures and Composites Center — University of Maine, Orono

Data Analyst *Feb' 2017 – May 2017*

- Analyzed data from a 52m composite windblade fatigue test using MATLAB

Instrumentation Technician *Summer 2016*

- Assembled DAQ systems and instrumentation for active research projects
- Conducted verification and maintenance of instrumentation

ASAP Media Services — University of Maine, Orono

Computational Media Designer *Sep' 2016 – May 2017*

- Developed visual art and explored interactive coding as a medium through which users can learn and play.
- Assisted with the realization of a capstone project on creating educational infographics using gestural hand interactions using Processing.
- Developed a webapp in CSS and P5.js to visually train and verify volunteers on measuring water turbidity; to act as a platform that allows volunteers to better assess the health of Maine's lakes.

Please refer to my Linkedin profile for the complete list of work experiences.

Skills

Languages: Extremely confident when developing in Python and C, and I have a solid working understanding and familiarity with the following languages: Java, Processing, P5.js, SQL, Bash (linux), MATLAB, Golang.

Frameworks/Libraries: Well versed with fastai/pytorch, tensorflow, numpy, pandas, cython, matplotlib.pyplot, pandas, opencv

Digital Environments: Extremely comfortable with Linux (Ubuntu) from years of daily use. Have developed and worked on applications, research projects, and APIs hosted on GCP and AWS. Extremely comfortable with GCP's AI Platform. Familiar with working with AWS EC2 instances. Mostly develop in VIM/tmux, Jupyter Notebooks, Spyder, or VSCode.

Areas of Expertise: *please refer to my portfolio linked above for a more full enumeration.* Large scale statistical research, data acquisition, webscraping, exploratory data analysis, computer vision, convolutional techniques, abstract mathematics.

Relevant Courses

Transcript provided at request

Mathematics: MAT 451 Dynamical Systems, MAT 463 Abstract Algebra, STS 434 Statistics, MAT 453 PDES, MAT 425 Real Analysis, MAT 452 Complex Analysis.

Physics: PHY 454 Electricity and Magnetism, PHY 469 Quantum Physics, PHY 472 Fourier Optics, PHY 442 Modern Experimental Physics, PHY 223 Special Relativity.

Engineering: MEE 251 Strength of Materials, ECE 465 Sensors, ECE 209 Circuits.

Awards

UMaine: Mathematics and Statistics Award (2015), UMaine Chadbourne Award (2015, 2016, 2017), UMaine Blackbear Award (2015, 2016, 2017), Adah Ginn & Clifford Patch Scholarship (2016), Physics and Astronomy Scholarship (2018), 1st Place UMMC Bouldering Competition, 2nd Place Maine Bound Boulder Bash.

MSSM: Ranked 57th Worldwide in Competitive Robotics (2015). Robotics Excelence Award (2015), Ricoh Sustainability Award (Maine State Science Fair)

Interests

Non-exhaustive: highlining/tightrope walking, bouldering, multi-pitch trad climbing, crocheting, skateboarding, risotto, LaTeX, linux, topological data analysis, tenor banjo, life outside of work.