STEFANO FOCHESATTO

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Profile

I'm a recent graduate student from mathematics at the University of Alaska Fairbanks. My mathematical interests lie in Graph Theory, Optimization, and Numerical Analysis. Most recently I've been researching methods for adaptive mesh refinement for free boundary problems. I also have a background in computer vision and machine learning.

Skills

Programming Languages: Matlab, Python, R, SQL, C/C++, LaTeX
Programming Tools: Git, OpenCV, Pytorch, Tensorflow, Google Cloud Platform, AWS, Microsoft Azure

Education

University of Alaska Fairbanks	United States
Master of Science in Mathematics	*August 2022 – Present*
University of Alaska Fairbanks	United States
Bachelor of Science, Major in Mathematics, Minor in Statistics	*August 2017 – Dec 2021*

Relevant Coursework:
- Direct Study: Machine Learning in the Cloud
- Numerical Linear Algebra | Numerical Analysis
- Regression & ANOVA | Scientific Sampling

Experience

Graduate Teaching Assistant — August 2022 – Present
University of Alaska Fairbanks Department of Mathematics and Statistics — *Fairbanks, Alaska*
- Instructed the online section of Calculus I(Spring 2023).
- Maintained office hours, general tutoring hours, organized and led structured review sessions to support students in exam preparation.
- Collaborated with faculty members to enhance course materials and implement effective teaching strategies.

Graduate Research Assistant — January 2022 – August 2023
University of Alaska Museum of the North — *Fairbanks, Alaska*
- Researched and developed a workflow for clustering herbarium sheet specimen in a way which signals species delimitation. Research was presented at Botany 2022.
- Applied multiple deep learning image clustering algorithms across both pytorch and tensorflow.
- Assisted in the development of a computer-vision and deep learning workshop for botanists at the Botany 2022 Conference.

Mathematics and Programming Intern — May 2022 – August 2022
Cold Regions Research and Engineering Laboratory — *Fairbanks, Alaska*
- Designed a deep learning algorithm to extract high quality snow cover data from time lapse videos.
- Aided multiple geo-science projects with statistical consultation on research design.
- Automated several workflows for collating and accessing data.

Direct Study — August 2021 – December 2021
University of Alaska Institute of Arctic Biology — *Fairbanks, Alaska*
- Assisted with the development of an undergraduate level Machine Learning course at UAF.
- Completed several Machine Learning projects, and model lab reports for future reference. Projects where primarily focused on Random Forest and Gradient Boosting models.
- Worked closely with Dr. Huettmann to create a ML model to produce a Relative Index of Occurrence (RIO) map for the Icelandic Rock Ptarmigan Species.

References

Prof. Jill Faudree
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