

DANIEL RALSTON

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EDUCATION

University of California, Santa Barbara

2021 - Present

Ph.D, Mathematics

Bowdoin College

2021

Bachelor of Arts *Magna cum Laude*; Mathematics Major, English Minor

GPA: 3.915 (Cumulative), 4.000 (Mathematics)

Awards: Phi Beta Kappa, Sarah and James Bowdoin Scholar

EXPERIENCE

Data Science Research Experience

Harvey Mudd College, CA
Summer 2020

Data Science Researcher

- Collaborated with a peer to analyze MRI brain and COVID-19 damaged lung images using machine learning, specifically deep learning with convolutional neural networks under guidance of Avery Professor of Mathematics Weiqing Gu
- Used Python 3 with a variety of machine learning, mathematical, visual, and data frame libraries
- Used R to examine statistical correlations among our algorithmic results
- Submitted final paper to the scholarly online library arxiv.org

Research Experience for Undergraduates

Grand Valley State, MI
Summer 2019

Pure Mathematics (Topology) Researcher

- Worked with Professor William Dickinson to optimally pack circles on a torus
- Used advanced techniques in Mathematica to efficiently create visuals and reduce computation
- Co-authored report to be submitted for future publication, and presented findings at the national 2019 Mathfest conference

TECHNICAL STRENGTHS

Scripting

Python 3 (Libraries: Tensorflow, Keras, Numpy, Pandas, Matplotlib)

Database Management

SQL (SQLite)

Modeling and Analysis

Mathematica, MATLAB

Word Processing & Typesetting

Microsoft Office, L^AT_EX

LEADERSHIP AND EXTRACURRICULARS

Bowdoin Outing Club

Brunswick, ME
2017 – 2021

Student Leader

- Trip leader and raft guide, including leading an orientation trip for nine incoming members of the Class of 2022
- Completed 50 hours of wilderness leadership training, including cultural discussions about the outdoor community and receiving the Wilderness First Responder Certification

Private Pilot and Instrument Training

Middlefield, NY
2016 – Present

- FAA Private Pilot License, Aircraft Single Engine Land with 110 hours total time
- Initial instrument rating ground work, covering topics weather and ATC procedures

Other Leadership and Activities: The Bowdoin Harpoon–Editor (satire); WBOR FM Radio Show Host