Nathan Safir

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EDUCATION

The University of Georgia, Foundation Fellow, *Athens, GA*   May 2022

- **Majors**: B.S. in Computer Science, B.A. in Geography, M.S. in Artificial Intelligence
- **GPA**: 3.95/4.00
- **Honors**: Foundation Fellowship (Selected as one of 20 first year students of ~1200 applicants to receive UGA's foremost undergraduate merit scholarship), CURO Grant Recipient (Research), National Merit Scholar, Honors Student, Dean's list
- **Relevant Coursework**: Computer Architecture, Data Science in Geography, Human Computer Interaction, Data Structures, Theory of Computation, Systems Programming, Software Development

Oxford University, Maymester, *Oxford, England*   May 2019

- **Course**: Computing Ethics and Society
- **GPA**: 4.00/4.00

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C++, R
- **Machine Learning Stack:** PyTorch, Keras, pandas, Google Cloud Platform, Jupyter Notebook
- **Web Development:** Javascript, HTML, CSS
- **Other Skills:** Git and Github, Linux, LaTeX, GIS

PROFESSIONAL EXPERIENCE

Google, STEP Intern, *Mountain View, CA (Remote)*   May 2020 - August 2020

- Authored code, co-wrote design docs, and reviewed pull requests for Engage – a web application which finds relevant news, books, and service projects from user's social media feed ([GitHub](#))
- Implemented news and books generation features and location integration of Engage using full-stack development, web scraping, and 3 Google API's (Navigator, Geocoder, and Books)
- Created web portfolio using **Java, Javascript, HTML, and CSS** as part of training procedure ([GitHub](#))
- Completed internal Google machine learning modules and participated in deep learning reading group on Counter Abuse Team

Quinn Research Group, Undergraduate Research Assistant, *Athens, GA*   January 2019 - Present

- Research applications for generative deep models in diagnosing ciliopathies from cell video data
- Create variational-autoencoder based models to find low-dimensional manifold representations of data with **PyTorch**
- Use Google Cloud Platform and TensorBoard integration to run and log experiments on new models

Netherlands Organization for Applied Science Research, Undergraduate Research Intern, *Delft, NL*   June 2019 - August 2019

- Developed novel triggering algorithm in **Python** to create training set by isolating audio signals from background noise
- Created convolutional deep learning models to differentiate between underwater neutrino signals and dolphin harmonics
- Final pipeline able to process raw mp3 data unsupervised and classify neutrino signals with over 99% accuracy

RESEARCH PUBLICATIONS

Publications:

Zain, Rao, **Safir**, Wyner, Humphrey, Eldridge, Li, AlAila, Dr. Quinn "Towards an Unsupervised Spatiotemporal Representation of Cilia Video Using A Modular Generative Pipeline" Accepted at SciPy 2020, Austin, TX

Presentations:

Zain, Wyner, **Safir**, Eldrige, Rao, Humphrey, Dr. Quinn "Unsupervised Spatiotemporal Representation of Cilia Video Using A Modular Generative Pipeline" Accepted at Southern Data Science Conference 2020, Atlanta, GA

Safir, Dr. Quinn, "An Unsupervised Approach to Phenotyping Ciliary Motion" Accepted at CURO Symposium 2020, Athens, GA

LEADERSHIP EXPERIENCE

Georgia Political Review, Editor-in-Chief, *Athens, GA*   August 2018 - Present

- Responsible for delivering print magazine; duties include pitch reviews, editorial deadline management, and promotion strategy
- Manage team of web developers to maintain and update website, revamped website layout and homepage to increase readership
- Write and edit content for print magazine and online articles

Deep Learning at UGA, Workshop Co-Chair, *Athens, GA*   October 2019 – Present

- Create, develop, and present workshops for teaching deep learning concepts to UGA community
- Responsible for recruiting guest speakers and serve on executive board for club operations

Corsair Society, Technology Sector Member, *Athens, GA*   February 2020 - Present

- Selected as one of five students for the premier organization that prepares UGA students for careers in technology
- Develop relevant skills through active industry discussion, professional development, and technical preparation

Athens Youth Hockey, Assistant Coach, *Athens, GA*   September 2019 - Present

- Create practice plans, coach players during weekly games and practices, and communicate logistics with administrators