Keshav Ganapathy

📞 +443 960 1960 | ✉ keshavg@umd.edu | 🐙 keshavganapathy | 💼 linkedin.com/in/keshavganapathy

EDUCATION

University of Maryland – College Park Aug. 2021 – May 2025 (Expected)
B.S. in Computer Science & Mathematics, Minor: Computational Finance GPA: 3.75
- **Relevant Coursework:** Data Structures, Algorithms, Computer Systems (C/Unix/Assembly), Discrete Mathematics, Programming Languages (Ruby, OCaml, Rust), Computational Methods, Computational Finance, Data Science
- **Awards & Activities:** BigThink AI (*President, 700+ Members*), $10,000 AFCEA-CMD Merit Scholarship 2021.

WORK EXPERIENCE

University of Maryland: College Park - CMSC College Park, Maryland
Teaching Assistant (TA), CMSC351: Algorithms July 2023 – Present
Raytheon Arlington, VA
Software Engineering Intern, BBN Technologies May 2023 - Present
- Refactored and enhanced an internal tool by leveraging **CesiumJS** and **Python** to display **100+** satellites and their maneuvers from an **SQLite** database, resulting in novel 3D globe, map, and satellite visualizations.
- Implemented and optimized **Orekit** orbital propagation algorithms in **Python** to generate training data for space-object-collision detection machine learning models to accept covariance matrices for more accurate predictions

Cigna Bloomfield, CT
Software Engineering Intern May 2022 - March 2023
- Completed full-stack tickets for the myPassport application, a pharmacy benefit management tool and the main component of the entire Cigna worker's compensation tech offering.
- Led **10+ interns** in the development of 4Sight, an internal web app that provides Cigna employees information on in-person attendance. 4Sight **increases employee retention** rate and promotes community amongst employees.
- Established a streamlined local development environment with **Postman** and custom **Docker** images.

University of Maryland College Park, MD
Researcher June 2020 - Aug 2020, June 2021 - Nov 2021
- Quantified gender and institutional bias in the conference paper review process using a web-scraped dataset of over **8000+** papers utilizing the **OpenReview API**, **Selenium**, Monte Carlo simulations, and logistic regressions.
- Co-first-authored a highly impactful paper that was presented at the **ICLR 2021 townhall** and selected as a **lightning talk** at the **NeurIPS 2020** Workshop on Navigating the Broader Impacts of AI Research. Papers and talks analyzed and quantified disparities in the review process based on factors such as gender, institutional affiliation, etc.

PROJECTS

CityWorks (Element Solutions, Co-Op Spring 2022) | *AWS, Spring Boot, React, and MariaDB*
- Successfully worked in a team of **6+ engineers** using **agile scrum** to create a full stack application using **React**, **AWS**, and **MySQL** to allow **hundreds of citizens** to request various social services (e.g trash pick up).
- Designed and implemented the database schema in MySQL, facilitating efficient storage and retrieval of requests.
- Developed **RESTful API** endpoints using **Spring Boot** in **Java** for efficient data handling in a MySQL database.

WebPoint Portfolio | *HTML, CSS, Pug, SCSS, JavaScript*
- Founded and led WebPoint, a volunteer organization that successfully developed and launched **5** websites for local businesses and organizations, receiving **100+** views per week.
- Spearheaded a tech team of **9+ engineers** to conceptualize, design, and implement all website features, including an in-browser text editing tool, allowing administrators to edit their website without technical understanding.

SKILLS

- **Languages:** Python, Java, C/C++/C#, JavaScript, SQL, MATLAB, SASS, OCaml, Ruby, Rust, Assembly (MIPS), LaTeX
- **Frameworks/Libraries:** Pandas, NumPy, TensorFlow, Scikit Learn, Pytorch, Flask, NodeJS, React, Springboot
- **Tools & Technologies:** Git, Postman, Docker, Jira, Confluence, Maven, MS Office/GSuite

PUBLICATIONS & PREPRINTS

- **Ganapathy, K.**[1], Liu, E.[1], Zarger, Z.[1], Somepalli, G., Goldblum, M., & Goldstein, T. (2021). An Investigation into the Role of Author Demographics in ICLR Participation and Review.
- Tran, D.[1], Valtchanov, A.[1], **Ganapathy, K.**[1], Feng, R.[1], Slud, E., Goldblum, M., & Goldstein, T. (2020). Analyzing the Machine Learning Conference Review Process. NeurIPS 2020 Workshop on Navigating the Broader Impacts of AI Research. arXiv preprint arXiv:2011.12919.
- **Ganapathy, K**[1]. (2020). A Study of Genetic Algorithms for Hyperparameter Optimization of Neural Networks in Machine Translation. arXiv preprint arXiv:2009.08928.