

Keshav Ganapathy

High School Senior & Machine Learning Enthusiast

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Experience

ASPIRE Intern

Johns Hopkins University Applied Physics Lab (JHU APL),

Mentor: Mr. J. McClellan

📅 June 2020 – Present

📍 Baltimore, MD

Acceptance Rate: ~16.6%

- Used the Ray python reinforcement learning library to run and develop learning scenarios
- Implemented a Kalman and Moving Average Filter for noise reduction and producing a research poster to be presented at the APL ASPIRE student showcase

REU-CAAR Researcher

University of Maryland (UMD), Mentor: Prof. T. Goldstein

📅 June 2020 – October 2020

📍 College Park, MD

1/30 High School Students selected to join the research team

- Created a data set of over 5000 conference papers using OpenReview API, Selenium, and web scraping tools
- Co-first author on paper accepted at the Navigating the Broader Impacts of AI Research NeurIPS 2020 Workshop

Assistant Researcher

Stony Brook University (SBU), Mentor: Prof. N. Balasubramanian

📅 July 2020 – October 2020

📍 Stony Brook, NY

- Developed and optimized software to measure sentence similarity to train a Neural Network for better performance
- Developed a deep Neural Networks for mechanism (explanation) classification in the biology subdomain with a 92% MCC score

Researcher

Johns Hopkins University (JHU), Mentor: Prof. K. Duh

📅 November 2019 – May 2020

📍 Baltimore, MD

- Developer of Genetic Algorithm and published algorithm results

Intern

iZen

📅 Summer 2019

📍 Palo Alto, CA

- Developed text to speech programs using SSML, C#, and Google Cloud's Text to Speech AI to generate 6 hours of educational content on Artificial Intelligence and Machine Learning

Intern

Blue Wave Semiconductors

📅 Summer 2017, Summer 2018

📍 Ellicott City, MD

- Led a group of interns to produce summaries of research papers on the topics of chemical deposition and CVD diamond films, and helped to integrate the material into the company's Hot Filament Chemical Vapor Deposition (HFCVD) System
- Constructed and tested substrate heaters and produced test reports using Microsoft Word, Excel, and Powerpoint
- Took calls from potential investors, consumers, and product suppliers

Education

Centennial High School

Computer Science Academy, Honor Roll

📅 2017 - Present

📍 Ellicott City, Maryland

- SAT I: 1510/1600, SAT II Math II: 800/800
- **Relevant Coursework:** Advanced-Data Structures G/T, Advanced Object-Oriented Design G/T, Computer Science A AP

Awards & Honors

- 🏆 Recipient of the \$10,000 AFCEA-CMD Merit Scholarship.
- 🏆 Simons Summer Research Program 2020 Admit (8% Acceptance Rate)
- 🏆 2nd Place in Best Health Tech Hack at DefHacks Virtual 2020 (Over 1200 attendees)
- 🏆 1st (2020) and 3rd (2021) place at FBLA Regionals for Website Design, 2x State Qualifier
- 🏆 1st Place in Wolfram Programming at hackUMBC 2019 (Over 170 attendees)
- 🏆 QuHacks - 1st Place in 2019, 2nd Place in 2018
- 🏆 AP Scholar with Distinction

Extracurriculars

Co-Founder

WebPoint

📅 April 2020 - Present

📍 Ellicott City, Maryland

- Trained and led a team of 15 in design and development of websites for small businesses.
- Reached out to local businesses and built client base.

In School Activities: Pyoneers - Founder and President (Over 50 Members); Robotics - Member; Varsity Tennis - Starting Player; FBLA - Vice President

Honor Societies: National Math - Public Relations Officer; Science - Member; Technology - Member; German - President

Event Organizing Experience: QuHacks 2020 - Organizer; HocoHacks 2020 - Vice President; Science in Society Conference - Planning Committee

Volunteer Work: Elevate your Future - Education Board Member; TeensGive - Tutor; Digitize Mentorship Program - Tutor

Publications

- D. Tran¹, A. Valtchanov¹, **K. Ganapathy**¹ et al. An Open Review of OpenReview: A Critical Analysis of the Machine Learning Conference Review Process. *arXiv: 2010.05137v1*, 2020.
- **K. Ganapathy**¹. A Study of Genetic Algorithms for Hyperparameter Optimization of Neural Networks in Machine Translation. *arXiv: 2009.08928v1*, 2020