Spandan Das

(571) 446 8105 • spandand515@gmail.com
linkedin.com/in/spandand • SD325

Education

Carnegie Mellon University **2024 (Expected)**
B.S. Computer Science

Relevant Coursework: Probability and Computing, Great Ideas in Theoretical CS, Principles of Functional Programming (SML), Principles of Imperative Computation (C), Math Foundations of CS, Matrix and Linear Transformations, Calculus in Three Dimensions, Great Practical Ideas of CS

Thomas Jefferson High School for Science and Technology
GPA: 4.6/4.0, SAT: 1590/1600

Relevant Coursework: Artificial Intelligence (Python), Computer Vision (C++), Machine Learning (Python), Parallel Computing (C), Probability Theory, Concrete Math, Multivariable Calculus, Linear Algebra

Experience

NASA Goddard Space Flight Center **June - August 2021; June – August 2020**
Machine Learning Intern

- Trained machine learning models on data from NASA's Global Precipitation Measurement mission's Core Observatory Satellite to classify precipitation type
- Developed ML models in **Python** (on **Linux**) using **NumPy**, **Pandas**, **TensorFlow**, **Scikit-learn**, **SciPy**, and **XGBoost**
- Utilized NASA Center for Climate Simulation (NCCS) supercomputing cluster to work with large data (2016 and 2017 annual satellite data) and optimize training of bagging models using multithreading
- Presented research to GSFC Climate and Radiation Lab and at international conference (AGU Fall Meeting 2020)
- `https://github.com/SD325/NASA_Internship_2020`

University of Virginia **June – August 2019**
Student Researcher

- Used web-scraping (**Beautiful Soup 4**) and machine learning (**Scikit-learn**) in **Python** to predict likelihood of premium subscription purchase for TV streaming platform
- Worked with UVA Professor Natasha Foutz and grad student

Projects

Tetris AI **March 2021**

- Modeled game of tetris from scratch in **Python**
- Used a genetic algorithm to place pieces in optimal location at each step
- Designed custom fitness function to compare boards of each generation

Skin Cancer Detector **April 2020**

- Classification of various skin lesions using **Keras** to train convolutional neural networks
- Achieved >92% accuracy using transfer learning
- `https://github.com/SD325/ISIC_Skin_Lesion_Detection`

Achievements

- 2021 USA Math Olympiad – Top 2% (Top 550 out of 30,000+ contestants; 232.5 USAMO Index)
- USA Computing Olympiad (USACO) – Gold Division
- 2021 CMU Math and Informatics Competition – 8th place team (out of 220+ teams)
- 2021 PurpleComet Math Meet – Honorable Mention Team (3000+ teams), 1st in Virginia
- Carnegie Mellon University Dean's List - Fall 2021
- 2019 VCU High School Programming Competition – 1st place team (out of 50+ teams)
- 2017-2019: American Computer Science League All-Stars (international) – 1st place individual (perfect score), 4th place team

Skills/Extracurriculars

Technical Skills: Java, Python, C, C++, LaTeX, HTML, Linux
Extracurriculars: Tennis, Hindustani Classical Music, CMU Sahara (Bollywood Fusion Dance), Basketball, Piano, Card/Board Games