Anirudh Sathish

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Education

University of South Florida — Tampa, FL
Bachelor of Science in Biomedical Science — *Aug. 2018 – May 2022*

Georgia Institute of Technology — Georgia, Atlanta
Master of Science in Computer Science — *Expected Graduation - Dec. 2025*

Experience

Undergraduate Research Assistant — October 2018 – August 2022
University of South Florida — *Tampa, FL*

- Assisted in the development of computational models using R to simulate immune system chemical dynamics
- Contributed to four research projects under Karthic Mayilsamy and Dr. Subra Mohaptra including:
  - "Combined Cell and Nano-therapy for Traumatic Brain Injury"
  - "Role of CCL20 in long term neurological sequelae of viral infection" ,
  - "Neurological consequences associated with sars-cov-2 infection in repeated traumatic brain injured mice"
  - "Nanoparticle mediated shRNA delivery for Traumatic Brain Injury"

Projects

Personal Website | *React, NodeJS, ExpressJS, TypeScript, TailwindCSS, HTML/CSS* — January 2025
- Designed a personal website utilizing modern frontend technologies
- Utilized Figma for design planning and adhered to modern day design principles

Distance Vector Routing | *Python, PyBGPstream, Linux* — July - August 2024
- Implemented Dijkstra's algorithm on set of network hosts to increase efficiency and communication between hosts
- Utilized PyBGPstream API and dynamic programming to match network hosts under various network topologies

Grocery Store Simulator | *Java, Docker, Git, UML*, JUnit — April - June 2024
- Collaborated with a team of 5 developers to create a running command-line grocery store simulator using Java, Docker and Git
- Utilized Object Oriented Programming to users to manipulate and control various objects within the simulated grocery store environment

Auction Website | *MySQL, PHP, HTML/CSS, Apache, Linux* — January - May 2024
- Engineered an auction website to enable users to list items for sale, set starting prices, define auction durations to foster a competitive marketplace utilizing HTML/CSS, PHP and object-oriented programming
- Implemented social features utilizing backend technologies such as MySQL and PHP
- Designed and implemented user authentication and account management systems allowing users to securely manage accounts with a team of 5 developers while hosting regular Agile sprint meetings.

Machine Learning Model | *Python, Linux, SciKit-Learn. NumPy, Pandas* — September - October 2023
- Developed and designed a machine learning model using ensemble techniques to predict values from large data sets with accuracy.
- Utilized Python and NumPy to implement decision and random trees and forests to improve predictive performance
- Utilized custom tests to confirm the model adheres to performance metrics such as accuracy and over fitting

Technical Skills

Languages: Java, Python, SQL, JavaScript, HTML/CSS, R, PHP
Frameworks: React, Node.js, Express.js, Mongoose
Developer Tools: Git, Docker, VSCode, Visual Studio, PyCharm, IntelliJ, Eclipse, Jupyter Notebooks, Postman, UML, Wireshark, Linux
Libraries: pandas, NumPy, Matplotlib, SciKit-Learn, PyBGPstream