

# Anirudh Sathish

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## EDUCATION

### University of South Florida

*Bachelor of Science in Biomedical Science*

Tampa, FL

*Aug. 2018 – May 2022*

### Georgia Institute of Technology

*Master of Science in Computer Science*

Georgia, Atlanta

*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
- Employed data visualization techniques using various Python and Java tools to process real-time data
- 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

### 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.

### Stock Portfolio Optimizer | *Python, Linux, NumPy, Pandas*

December 2023

- Authored a script to calculate the optimal allocation of funds to a stock portfolio utilizing historical stock price data
- Designed the script to assess past market conditions and portfolios based on historical performance

### 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, C/C++, SQL, JavaScript, HTML/CSS, R, PHP, Apache, MongoDB, LaTeX

**Frameworks:** React, Node.js, JUnit, Express.js, Mongoose

**Developer Tools:** Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Jupyter Notebooks, Postman, UML, Wireshark, Linux

**Libraries:** pandas, NumPy, Matplotlib, SciKit-Learn, PyBGPstream