

Nikhil Munagala

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Education

Rutgers University-New Brunswick

Jan 2025

B.S. Computer Science

GPA: 3.5/4.0

- **Coursework:** Data Structures, Design and Analysis of Algorithms, Principles of Databases and Management, Software Methodology, Internet Technology, Computer Security, Introduction to Data Science, Systems Programming
- **Awards:** Dean's List for Exceptional Academic Performance in 2024

Skills and Certifications

- **Languages:** Java, Python, HTML, CSS, Javascript, C, SQL, R
- **Tools:** React.js, Express.js, Firestore, Node.js, AWS, Git, Github, Pandas, NumPy, JavaDoc, Flet, OpenCV, Figma, Flask
- **Certifications:** AWS Solutions Architect Associate, AWS Certified Cloud Practitioner, ISC2 Certified in Cybersecurity

Experience

Software Engineering Intern *Bright Sparks Academy*

Jul 2024 - Aug 2024

- Refined **Figma** layout specifications to improve overall responsiveness of a **React** full-stack tutoring platform, optimizing user experience through an achieved **22%** average load time reduction
- Created **64** scalable **Express.js REST API** endpoints for effective real-time data management with **Firestore** while integrating **CalendlyAPI** for meeting scheduling, prioritizing robust and secure data retrieval processes
- Incorporated **DevOps** practices such as **Continuous Integration/Continuous Delivery (CI/CD)** and **source code management** to maintain smooth software compatibility

Tech Director *Rutgers University - Undergraduate Students Alliance of Computer Scientists*

Sept 2022 - May 2023

- Organized **UHACCS**, USACS student-run hackathon, in collaboration with four other computer science student clubs to manage event planning, vendor selection, and budget allocation, attaining a **51%** growth in member participation
- Facilitated weekly development progress meetings for **33** teams along with instructing workshops on cutting-edge technologies for USACS Labs, a program fostering hands-on project creation, elevating meeting attendance by **44%**

Data Structures Assignment Developer *Rutgers University- CS112*

Jun 2022 - Aug 2022

- Worked jointly with developer teams to design engaging **Java** assignments for the Data Structures course featuring real-world applications like university bus systems, boosting student engagement by **17%**
- Utilized the iterator **Object-Oriented Programming** design pattern to enhance the code structure of assignments focused on course concepts including trees and graphs, detailing comprehensive **JavaDoc** documentation
- Collaborated with course staff in weekly sprints to revamp assignment writeups and existing features, employing **Git** and **Github** for seamless integration, resulting in an average increase of **13%** in weekly code development

Projects

CloudPhotoGallery *React, Flask, Amazon Rekognition, Amazon S3*

Jun 2024 - Present

- Designed the home and album pages of a React photo gallery website, ensuring a minimalist, user-friendly layout
- Implemented automatic tagging using Amazon Rekognition, streamlining image navigation to reduce retrieval time
- Continuously expanding a modular Flask **RESTful API** in providing endpoint capabilities supporting image compression and album collaboration, enabling flexible data storage mechanisms for user albums on Amazon S3

RUVerify *Flet (Python), OpenCV, MySQL, NumPy, Pandas*

Feb 2023 - July 2023

- Spearheaded the innovation of an advanced facial recognition model application within a four-member developer team, designated for granular student access control of Rutgers recreational facilities and public libraries
- Engineered a secure Flet authentication page with **AES-256** encryption for stored passwords from a MySQL database
- Leveraged OpenCV to perform image comparison between facial recognition scans and student ID images from the MySQL database, achieving a **95%** detection accuracy
- Managed a secondary MySQL database to perform detailed analysis of ID loss hotspots using NumPy and Pandas functionalities, informing model implementation