

Mihir Chanduka

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EDUCATION

Rutgers University

B.Sc. in Computer Science and Economics

New Brunswick, NJ

Expected Graduation Date: May 2027

PROJECTS

EKGuide (RUHealth Hacks 4th Overall)

- Developed an EKG Generation tool that simulates EKG graphs using mathematical models to help students identify abnormalities related to various cardiovascular issues.
- Integrated the ChatGPT API to provide real-time feedback based on user responses, enhancing learning through interactive problem-solving.

Optical Flow Anitcheat | github.com/mihirchanduka/Optical-Flow-Anticheat

- Developed a proof-of-concept anti-cheat system using optical flow, OpenCV, CNNs, and RNNs to detect abnormal player motion, achieving 87% accuracy in identifying cheaters in Counter-Strike.
- Applied deep learning, statistical modeling, and advanced data analysis to distinguish legitimate gameplay from potential cheating behaviors.

Home Server

- Engineered a containerized server environment using Docker to deploy and manage multiple services.
- Deployed and maintained Jellyfin (media streaming), Nextcloud (self-hosted cloud storage), and an iMessage relay server (macOS VM) for seamless cross-platform communication.
- Continuously monitored and updated server for upkeep, applying best practices in security, system administration, and network management.

Awayfrom.tech (MLH Bon Voyage Hacks 2nd Overall) | <https://devpost.com/software/away-from-tech>

- Developed a web application for discovering unique camping locations using JavaScript, integrating multiple government APIs and Google Cloud services for real-time data retrieval, user ratings, and crowd predictions.
- Engineered a cloud-based backend using Google App Engine and Firestore, resolving API authentication challenges and successfully deploying the project on a custom domain.
- Implemented a predictive crowd analysis system, leveraging weather, season, user activity, and ratings to assist with trip planning.

Posterboxd | github.com/mihirchanduka/posterboxd

- Developed a Python script that generates custom movie posters based on a user's Letterboxd profile, utilizing the API to fetch favorite movies and total watch history for personalized visualizations.
- Leveraged multithreaded processing to efficiently manipulate images and handle large datasets, providing detailed user statistics like total watch time and movie count.

Genesis GPA Calculator | github.com/mihirchanduka/GenesisGradeCalculator

- Utilized Selenium to scrape data from school's gradebook, allowing automated data retrieval without an API
- Designed a dynamic data parsing and storage system that processed and handled incoming data in real-time

EXPERIENCE

Rutgers University Drivers Club

Founder, Vice President, Treasurer

September 2024 - Present

New Brunswick, NJ

- Coordinated regular meetups, fostering a community of automotive enthusiasts among university students.
- Managed club finances, overseeing funding allocation for events, merchandise, and operational expenses.

Rutgers Formula Racing

Data Acquisition Engineer - Automotive Suspension and Aerodynamics

September 2023 - September 2024

New Brunswick, NJ

- Researched torque vectoring for electric vehicles with all-wheel-drive systems to improve vehicle handling
- Designed and implemented data monitoring systems to evaluate real-time performance of the vehicle

FRC Team 2554

Electrical Team Lead

October 2019 - August 2023

Edison, NJ

- Led electrical sub-team to become Global Finalists (**20 of ~1,000 teams**) for the 2021 Season with the design of VisualEyes, an AI-powered device mounted on a hat aiding mobility for the visually impaired
- Orchestrated and ran a Python and Arduino curriculum for **3,500+** students, a **50%** increase over previous years

SKILLS & ACHIEVEMENTS

Languages: Java, Python, C/C++, HTML/CSS, JavaScript, Markdown, LaTeX

Frameworks & Libraries: PyTorch, TensorFlow, OpenCV, Selenium, NumPy, Pandas, Matplotlib

Tools: Linux, Git, Arduino, Vim, Bash, AWS, Azure, Google Cloud

Software: Ansys HFSS, Ansys STK, Solidworks, Blender, Photoshop, Docker

Achievements: Eagle Scout (2 Eagle Palms), FIRST Innovation Global Finalist (FRC Team 2554)