

# Mihir Balsara

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## EDUCATION

### Georgia Institute of Technology

Candidate for Bachelor's in Computer Science

Atlanta, GA

Aug. 2023 – Dec. 2026

## EXPERIENCE

### Cybersecurity Research Intern | C, Java, Jenkins, Python, docker, Git

May 2024 – Present

Georgia Tech Research Institute

Atlanta, GA

- Competing in the DARPA AI Cyber Challenge (AlxCC) with Team Atlanta (SSLab, GTRI, KAIST Hacking Lab, Samsung Research Korea, etc.)
- Develop **fuzzing** tools to find vulnerabilities within Jenkins source code
- Develop **automated** tools utilizing fuzzing and **machine learning** to automate vulnerability detection and patching

### Avionics Software Engineer | Python, C++

Sep. 2023 – May 2024

Georgia Tech Experimental Rocketry

Atlanta, GA

- Developed a Controller Area Network (CAN) module to communicate with ground and rocket

### Software Developer Internship | WordPress, PHP, SQL, CMS

Apr. 2023 – May 2023

RK Centers

Burlington, MA

- Designed and developed a custom **CMS** platform for streamlined property and snow bidding processes
- Built a secure login and user-friendly property selection portal using **WordPress** and **PHP**.
- Optimized **MySQL** database structure to ensure seamless integration with the new site framework.
- Increased client-server interaction efficiency by 20% resulting in faster loading times and improved user experience

### Research Assistant | Python, pandas, Matplotlib, Seaborn, SciPy

Aug. 2021 – Jul. 2022

Boston College

Chestnut Hill, MA

- Conducted research on the impact of online vs. offline education on student performance in mathematics
- Utilized data visualization tools to create compelling visuals that highlighted the differences in students' math performance reports.
- Published research findings on the impact of online vs. offline education on student performance in mathematics in a peer-reviewed journal at Boston College

### Data Engineer | Python, pandas, Matplotlib

Jun. 2021 - Aug. 2021

Russian School of Mathematics

Lexington, MA

- Mined student score and report data from RSM's database to identify trends in student performance
- Created an efficient algorithm to process and analyze 2 million student data points
- Leveraged **pandas** library to clean and prepare 2 million student data points for analysis

## PROJECTS

### Omex Development | JavaScript, Node.js, MongoDB, Docker, Jenkins

Jul. 2021 – Present

- Designed and developed two applications for the Discord platform, reaching a user base of 346,075
- Automated application deployments using Docker containers
- Implemented a Jenkins pipeline for continuous integration and delivery, minimizing downtime during updates to less than 10 minutes

### Silicon Studios | Lua, Blender, Roblox Studio

Jul. 2018 – Present

- Managed development of the popular Roblox game, "Drive a Tesla," achieving over 5 million visits
- Managed a team of builders and developers to create functional game assets
- Recipient of the **Adurite Crown of O's** virtual award for exceeding 10,000+ monthly active users

## TECHNICAL SKILLS AND AWARDS

**Languages:** Java, Python, SQL (Postgres), PHP, JavaScript, HTML/CSS, C#

**Frameworks:** React, Node.js, JUnit, WordPress

**Developer Tools:** Jenkins, Git, Docker, Amazon Web Services, VS Code

**Operating Systems:** Windows, MacOS, Debian Linux

**Libraries:** pandas, NumPy, Matplotlib, Seaborn, SciPi

**Awards:** Xerox Award for Innovation and Information Technology