Ahmed Khan

ahmedkhan.ayk@gmail.com • (443)-609-2001 • akhan.netlify.app • github.com/CaptOpi

EDUCATION

Rutgers University | New Brunswick **December 2024**

B.S. in Computer Science **GPA: 3.32**

Relevant Courses: Databases, Data Structures and Algorithms, Systems Programming, Introduction to Artificial Intelligence, Computer Architecture, Data Management, Software Methodology, Discrete Structures

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, Go, C#, C, HTML/CSS, XML

Technologies: React, REST, Node, Express, MongoDB, NoSQL, Git

WORK EXPERIENCE

Rutgers University - New Brunswick | Computer Lab Technician **Sep. 2021 - Jan. 2022**

- Maintained and secured **40**+ computer lab facilities and technical equipment, ensuring optimal functionality.
- Collaborated with IT staff to diagnose and resolve technical issues for students and faculty.
- Established Python-based reporting tools to ticket workflow, streamlining issue tracking and response times.

PROJECTS

StubHub Ticket Monitor | Freelance Developer

Tools Used: Go, TLSClient, goquery, discordgo

- Built a real-time ticket monitoring tool that alerts users to price drops on StubHub, monitoring hundreds of events every second.
- Implemented an automated alert system using Discord webhooks to trigger notifications for price drops and profitable deals; this system now handles **100**+ alerts daily, streamlining decision-making for pricing strategy.
- Engineered a scalable proxy solution that dynamically distributes **7,000**+ concurrent HTTP requests across multiple servers, effectively preventing rate limiting and mitigating server overload.
- Developed a custom goquery script for extracting critical pricing data, resulting in accurate alerts delivered within **10-15 seconds** of new information and improving overall profit margins.

Intruder Alert Simulation | Personal Project

Tools Used: Java, Bayesian Probability, Grid-based Search Algorithms

- Assembled a Java-based deep-space simulation where autonomous bots use Bayesian sensor fusion and gradient-based movement planning to locate and capture stationary and stochastic targets.
- Partnered with a peer to design and implement a security simulation, applying agile development practices.
- Created a custom predictive algorithm that reduced average capture moves by up to **20%,** optimizing sensor sensitivity and demonstrating significant efficiency gains through rigorous performance analytics.

HatchHabit | HackTCNJ Submission

Tools Used: React, Node, Express, MongoDB

- Constructed a web platform using the MERN stack (MongoDB, Express, React, and Node), implementing **5**+ unlockable tiers for a seamless user experience in tracking goals and tasks.
- Designed a robust user information model utilizing MongoDB with **10**+ schema types, ensuring efficient storage and rapid retrieval of diverse user information.
- Collaborated closely with another developer, engaging in pair programming and code reviews to troubleshoot database configuration and ensure persistent user data.