Aayush Singh

aayushkt@gmail.com (980)-315-6549

github.com/aayushkt aayushkt.com linkedin.com/aayushkt

EDUCATION

University of North Carolina at Chapel Hill **August 2020 - May 2024**
Bachelor of Science: Computer Science [Chapel Hill, North Carolina]
Minor in Data Science and Minor in Mathematics
Cumulative GPA: 3.63 | Dean's List | Carolina Honors Student | Graduated with Distinction

WORK EXPERIENCE

Senior Developer & Co-Founder - Moira Labs LLC **Sep 2022 - Present [1+ Years]**
- Successfully managed a team of developers designing, writing, and reviewing code across three projects
- Led the deployment of several AWS cloud systems, gaining extensive hands-on experience in cloud computing
- Utilized technologies such as Python, C#, SQL and .NET in developing core company software infrastructure
- Hand-picked for Private Venture Group's exclusive startup accelerator program
- Semi-finalist for New York University at Stern's Berkley Entrepreneurs Challenge and Accelerator program

Firmware Programmer - 3DFS Technologies **Mar 2022 – Aug 2022 [5 Months]**
- Optimized firmware using algorithms in embedded programming and C++ for hardware control systems
- Created a custom software control bus which allowed the team to synchronize complex machinery inexpensively
- Used real-time control techniques and signal processing to analyze and improve system performance
- Employed statistical analysis and data modeling to predict machine failure and course-correct preemptively

Software Engineer - 3DFS Technologies **Jan 2022 – Mar 2022 [3 Months]**
- Designed a custom Postgres SQL database which increased inventory volume and availability by over 20%
- Developed a front-end web interface using Python, HTML, and CSS to automate and verify data entry
- Implemented secure remote software updates via Java Servlets on Microsoft Azure cloud
- Used cryptography and cybersecurity techniques to detect malware and securely lockdown and encrypt software

Undergraduate Teaching Assistant - UNC Chapel Hill **Aug 2020 – May 2021 [10 Months]**
- Created lesson plans for 200+ UNC students Math 231 and Math 110L (Calculus and Advanced Algebra)
- Produced over 3 hours of educational videos addressing subjects of low student performance
- Hosted personal one-on-one tutor sessions with students and communicated difficulties to professors

NOTABLE ACHIEVEMENTS

- Selected by two PhD candidates for my ability to innovate and solve problems, to research pre-executing compiled C++ code by studying formal axioms in mathematical logic systems
- Invented an algorithm which perfectly solved the game 'Chopsticks', using graph traversal algorithms and linear algebra, demonstrating strong analytical skills and proficiency in Python
- Independently designed and implemented a custom TCP networking protocol to prioritize large-scale data transfer and bandwidth, gaining in-depth knowledge of networking principles and protocols.

RELEVANT COURSEWORK

Data Structures and Algorithms | System Programming | Databases | Web Development | Cloud Engineering
Cybersecurity | Machine Learning | Data Models and Inference | Networks and Protocols | Statistics in Data Science

TECHNOLOGIES

Python | .NET | C# | Java | SQL | JavaScript | AWS | Azure DevOps | Cloud Engineering | Data Analytics | Linux |
HTML | CSS | C/C++ | RESTful API | Linux | Docker | GitHub | TCP/IP | Machine Learning | Node | React