Aayush Singh

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

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

EDUCATION

University of North Carolina at Chapel Hill **August 2020 - May 2023**
Bachelor of Science: Computer Science [Chapel Hill, North Carolina]
Minor in Data Science and Minor in Mathematics
Cumulative GPA: 3.63 | Dean's List 2021-Fall | Carolina Honors Student | Graduated with Distinction;

WORK EXPERIENCE

Software Developer - Moira Labs LLC **Sep 2022 - August 2023 [1 Year]**
• Led the deployment of several AWS cloud systems, gaining extensive hands-on experience in cloud computing
• Successfully managed a team of developers, demonstrating strong leadership and project management skills
• Utilized technologies such as Python, C#, SQL and .NET in developing core company software infrastructure
• Under my leadership, the team was hand-picked for Private Venture Group's exclusive startup 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, showcasing my ability to build and troubleshoot web applications
• Implemented secure remote software updates via Java Servlets on Microsoft Azure cloud, demonstrating my knowledge of cloud foundations

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

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 to perfectly solve the game 'Chopstix', using graph traversal algorithms and linear algebra, demonstrating strong analytical skills and proficiency in Python
• Independently designed and implemented a custom version of the 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 | Machine Learning | Linux | HTML | CSS | C | REST API | Linux | Docker | Git | GitHub | TCP/IP