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Aayush Singh

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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

Co-Founder and Senior Developer - Moira Labs LLC   **Sep 2022 - Present**
- Collaborated with two individuals to build a blockchain-based gaming company
- Deployed back-end AWS cloud systems (SQL databases, API Gateways, Lambda functions, User Authentication)
- Coded core company software and minimum viable product using .NET framework
- Managed team of multiple developers, responsible for pull requests and GitHub workflows
- Hand-picked for Private Venture Group's startup accelerator program

Firmware Programmer- 3DFS Technologies   **Mar 2022 – May 2022 [5 Months]**
- Built precision robot to assemble client products using embedded systems programming techniques in C
- Utilized tools to measure and electronic components such as oscilloscopes, digital multimeters, and more
- Optimized firmware to control large motors, servos, and sensors through a custom programmed I2C bus
- Used real-time control techniques from sensor data to analyze and improve systems performance

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%
- Created Python, HTML, and CSS based front-end to replace lengthy administrative processes for employees
- Developed security mechanisms using BCrypt hashing and true random number generation
- Implemented remote software updates via Java Servlets, using the Microsoft Azure cloud

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 ~180 minutes of educational videos addressing subjects of low student performance
- Bridged student-professor relations by holding 15 hours of personal instructing sessions

NOTABLE ACHIEVEMENTS

- Individually selected to participate by two PhD candidates to research the impact of pre-executing compiled C code
- Invented an algorithm to perfectly-solve the game 'Chopstix' and implemented it in Python
- Placed top ten in the Duke University TriComm Mathematics Modeling Competition

RELEVANT COURSEWORK

Discrete Math | Data Structures and Algorithms | Differential Equations | System programming | Advanced Probability | Combinatorics | Data Models and Inference | Algorithms and Analysis | Linear Algebra | Cybersecurity | Databases | Machine Learning | Networks and Protocols | Statistics in Data Science | Web Development

TECHNOLOGIES

SQL | Python | .NET | C# | Java | Node | React | JavaScript | AWS | Azure DevOps | Cloud Engineering | MatLab | Data Analytics | Data Science | Object Oriented Programming | Machine Learning | Google Sheets | Excel | Powerpoint | Word | Linux | HTML | CSS | C | C++ | JSON | Windows | MacOS | REST API | Linux | Debian | Docker | Git | GitHub | Ubuntu |