Sushant Potu

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Education

University of North Carolina at Chapel Hill Expected May 2027

B.S. Computer Science, B.S. Statistics and Analytics | ***GPA**: 3.67/4.0* *Chapel Hill, NC*

- **Relevant Coursework**: Data Structures, Algorithms and Analysis, Computer Organization, Methods and Models of Data Science, Programming Methods, Models, Languages, and Analysis, Discrete Mathematics

Experience

Data Engineer Intern May 2025 – Aug. 2025

Blue Cross Blue Shield NC *Durham, NC*

- Engineered 5 end-to-end **ETL pipelines** using **Python** and **SQL**, achieving **100% automation** of weekly log processing and completely eliminating manual data entry/analysis.
- Developed a server workload forecasting system using **Stacking Regressors (Random Forest + Gradient Boosting)** to analyze pipeline performance, processing gigabytes of **Snowflake** log data via **Pandas/NumPy**.
- Deployed the model as an interactive **Streamlit** web application, enabling internal teams to visualize capacity constraints and proactively optimize resource allocation with ease.

Software Developer Aug. 2024 – Present

CARVR *Chapel Hill, NC*

- Collaborated within a 4-person team in an **Agile/Scrum environment**, participating in bi-weekly sprints, code reviews, and used **Git** to successfully implement several new features for **AR/VR applications**.
- Engineered core gameplay modules for a VR rhythm game on the Oculus platform using **Unity's XR Toolkit, C#, and ShaderLab** such as a custom system that parses musical data and algorithmically generates dynamic visual cues.

Research Assistant May 2025 – August 2025

University of North Carolina *Durham, NC*

- Executed **comprehensive test suites** for 3 novel **holographic display prototypes** and reduced debugging time by 40% through **systematic testing protocols**, enabling faster iteration cycles for research teams.
- Designed and fabricated over 20 custom components using CAD and 3D printing to support the precise alignment of experimental optical hardware

Projects

NoteTaker | *Mobile Note-taking Application* In Progress

- Architected a full-stack **React Native** and **FastAPI** solution for end-to-end note management, enabling real-time creation, digitization, and sharing of hybrid style/language documents.
- Engineered an **OpenCV pipeline** utilizing **gamma correction** and **morphological erosion** to reconstruct fragmented stroke topology, significantly improving recognition accuracy for **variable-pressure inputs**.
- Integrated **PaddleOCR** with a **custom spatial sorting algorithm** to resolve non-linear alignment artifacts, enforcing strict **coordinate-based reading order** across multi-line text when recognizing text.

CDS Macro Tracker | *iOS Application* August 2025

- Developed a native iOS application in **Swift** using a declarative **SwiftUI** front-end and **MVVM architecture** to provide a clean, responsive user interface for displaying nutritional data.
- Implemented a client-side web scraper using URLSession and **SwiftSoup** to parse HTML and JSON from the UNC Dining website; successfully reverse-engineered internal AJAX requests to fetch and display real-time nutritional information.

Drum Rhythm Game | *VR Game - CARVR* May 2025

- Developed a VR rhythm game for Oculus platform using **Unity's XR Toolkit** and engineered a **custom beat-mapping system** with C# that uses **parsed musical data** and algorithmically generates **dynamic visual cues** for an interactive gameplay experience.

Technical Skills

Languages: Python, Java, JavaScript, C, C#, SQL, Swift, HTML/CSS, R
Frameworks, Libraries & APIs: React, Node, Flask, Pandas, Numpy, Scikit-learn, SwiftUI, OpenCV
Tools/Design: Git, Unity, Docker, Tableau, RStudio, PostgreSQL/MySQL, Xcode, Snowflake, REST APIs