

Aneesh Sallaram

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EDUCATION

University of North Carolina at Chapel Hill
Bachelor of Science in Computer Science, Statistics

Chapel Hill, NC
Aug. 2022 – May 2026

EXPERIENCE

Software Engineering Intern – AI & Automation
ArcanaNetworks Inc.

June 2024 – Present
Phoenix, AZ

- Designed modular AI agents to validate Device Markup Language (DML) scripts, enabling reuse across projects.
- Developed a **C# WPF (XAML)** application on **.NET 7.3** to enforce DML schemas, simulate scripts, and provide structured error reporting, reducing debugging time.
- Implemented a **RAG-based agent system** to iteratively refine XML scripts using feedback from CLI and HTTP execution environments, improving script accuracy.
- Authored internal documentation and schema for **DML**, standardizing formats and increasing developer productivity.

Undergraduate Research Assistant
UNC Sports Analysis Intelligence Lab

Aug. 2023 – Present
Chapel Hill, NC

- Built scalable **FastAPI** and **PostgreSQL** services to automate data ingestion and reduce processing time for UNC Athletics pipelines.
- Developed **React** and **R Shiny** dashboards integrating live API data, giving coaches access to performance metrics.
- Optimized **Python/pandas** backend and **PostgreSQL** queries with batching and vectorized operations, cutting dashboard load times by 50%.

PROJECTS

UNC Sports Data Analysis Platform
UNC Athletics Project

Feb. 2024 – Present

- Delivered a full-stack platform for UNC teams to track athlete performance and injury data by building REST APIs with **FastAPI**, **PostgreSQL** schemas, and **DynamoDB** for high-velocity event data, containerized with **Docker**.
- Improved data ingestion by using **Kafka** for real-time ingestion and **Redis** caching to reduce query latency.
- Enabled coaches to monitor player trends through dashboards built with **React**, **FastAPI**, and **PostgreSQL**.

Student Clubs Roster Management
Class Project

Sep. 2024 – Nov. 2024
Chapel Hill, NC

- Delivered a web platform for student clubs to manage rosters, participation, and events, streamlining workflows.
- Increased data security by implementing role-based admin access controls for managing sensitive member information.
- Built a full-stack with a responsive **Angular/TypeScript** frontend, **RESTful APIs**, and **PostgreSQL**.

College Basketball Archetype Analysis
Independent Project

Jan. 2025 – Mar. 2025
Chapel Hill, NC

- Engineered scalable **Python** pipelines (**pandas**, **NumPy**, **SQLAlchemy**) to scrape, preprocess, and store large datasets of player and lineup statistics.
- Developed Bayesian modeling and efficiency metric services with **PyMC** and **scikit-learn**, deployed via **FastAPI REST APIs** for integration with external tools.
- Built interactive dashboards and visualizations using **React**, containerized with **Docker** for reproducibility.

TECHNICAL SKILLS

Languages: Python, Java, C#, TypeScript, SQL, JavaScript, R
Frameworks & Libraries: .NET, FastAPI, React, Angular, scikit-learn, PyMC
Infrastructure & Tools: Docker, Kubernetes, Redis, Kafka, CI/CD, Git
Databases: PostgreSQL, MongoDB, DynamoDB
Data Engineering & Visualization: pandas, NumPy, matplotlib, R Shiny, ggplot2