Sujay Patel

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EDUCATION

University of North Carolina at Chapel Hill Chapel Hill, NC

Computer Science B.S., Biomedical Engineering B.S. Aug. 2022 – May 2026

- **GPA: 3.97/4.00**
- Relevant Coursework: Data Structures and Analysis (**Java**), Discrete Structures, Scientific Programming (**Python**), Foundations of Programming (**Java**), Systems Fundamentals (**C**), Calculus 3, Differential Equations

PROJECTS

Deals For You | *Spring Boot, TensorFlow, React.js, PostgreSQL, Webscraping* Website | Source Code
- Built a full stack clothing website with over **100+** users using **Spring Boot** and **React** that displays the latest deals and promos for popular brands and developed user security using JWT Tokens and Spring Security.
- Hosted a **TensorFlow** ML model using **Flask** that classifies clothing images to over **90%** accuracy and recommends them to the user based on ratings and previous purchases.
- Webscraped using **BeautifulSoups** and **Selenium** and stored product data in a **PostgreSQL** database.

NBA Premier Stats | *Spring Boot, Scikit-Learn, PostgreSQL, React.js, Webscraping, APIs* Website | Source Code
- Succesfully created a full stack application using **Spring Boot** and **React** that displays historic NBA rankings from the last 10 years, and predictions about future player stats using a **Scikit-Learn** Random Forest Regressor.
- Utilized **Beautiful Soup** and Jupyter Notebooks to webscrape the NBA.com site to obtain data of over **400** NBA players and imported data into a **PostgreSQL** database.
- Connected an ESPN **API** to display new NBA related news from a variety of sources with filtering options.

Housing Prices Predictor | *Scikit-learn, Django, React.js, HTML/CSS* Source Code
- Created a full-stack **Scikit-Learn** model that predicts housing prices from Zillow data from over **100** regions.
- Utilized a **Random Forest Regressor** model that predicts prices withing **95%** accuracy.

EXPERIENCE

Software Engineering Fellow July 2024 – Present

HeadStarter AI Remote
- Developing **10+ projects** and competing in hackathons with goal to develop an application with **1000+ users.**
- Leveraged **PyTorch** and **TensorFlow** to provide AI algorithimic analysis to web applications and provide personalized layouts and analysis for users.
- Utilize technologies such as **TypeScript**, **Angular**, and **Node.js** for full stack development of web applications.

Research Assistant Jan 2024 – Present

UNC Department of Physical Sciences Chapel Hill, NC
- Utilized **Python** and **C++** to successfully develop a full fledged particle simulation and integrated libraries such as Matplotlib, Pandas, and Numpy for post-analysis and further research.
- Succesfully tracked particle movements to within **5%** accuracy of real-time analysis through class assignments.

Undergraduate Teaching Assistant January 2024 – May 2024

UNC Department of Physics and Astronomy Chapel Hill, NC
- Lead physics lab sessions with over **50** undergraduate students to explain physics concepts and equipment use.
- Increased student scores on lab reports in my lab section by **10 percent** compared to other lab sections.

LEADERSHIP AND CLUB ACTIVITES

Coding Leader Jan 2024 – Present

Biomedical Devices Club Chapel Hill, NC
- Taught basic programming in **Python**, and libraries such as numpy and matplotlib to over **40** club members.
- Led meetings to teach **C++** in the Arduino IDE for creating circuits and basic electrical devices.

TECHNICAL SKILLS

Languages: Java, Python, C++, C, SQL, JavaScript, TypeScript, HTML/CSS, Swift
Frameworks and Libraries: AWS, React, Node.js, Angular, Django, Bootstrap, NumPy, Matplotlib, pandas
Developer Tools: Git, Docker, XCode, VS Code, IntelliJ