Anita Murali

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EDUCATION

University of North Carolina at Chapel Hill   **May 2024**
B.S. in Applied Mathematics and Computer Science, Minor in Statistics & Analytics

Relevant Coursework:
Mathematics + Statistics: Optimization with Applications in Machine Learning, Mathematical Methods in Physical Sciences, Numerical Analysis, Complex Analysis, Real Analysis, Combinatorics, Intro to Data Science, Intro to Probability, Linear Algebra
Computer Science: Intro to Machine Learning, Algorithms, Files and Databases, Software Engineering Lab, Foundations of Software Engineering, Models of Languages & Computation, Computer Organization, Data Structures

EXPERIENCE

Bandwidth | Software Development Intern   **May 2023 - Jul. 2023**
- Deployed Jupyterhub application to OpenShift, leveraging Snowflake and Okta integration which significantly offloaded ML environments from local setups and AWS Sagemaker instances, reducing computational costs by over 40% and enabling parallel training of 5 models simultaneously
- Developed a Prefect workflow to streamline the onboarding of customers by integrating three distinct tasks, leading to a 25% increase in onboarding efficiency, while also enhancing self-service and UI capabilities for cross-team utilization

UNC Computer Science Department | Undergraduate Teaching Assistant   **Aug. 2022 - Dec. 2022**
- Conducted office hours for the course Data Structures and Analysis for 10 hrs/week for 146 students and answered their individual questions
- Organized comprehensive review sessions on key concepts like Arrays, Linked Lists, Stacks & Queues, Heap & Priority Queues, Binary Trees, Binary Search Trees, etc. which were attended by over 100 students per session

Duke Energy | Data Analyst Intern   **May 2022 - Aug. 2022**
- Utilized Natural Language Processing (NLP) and the Transformers language model to integrate disparate datasets, creating the foundation for predictive modeling of equipment failures that improved accuracy by 30%
- Conducted 4 Exploratory Data Analyses (EDA) to explore correlations among unit types, age, downtimes, and failed starts at various plants

Mathnasium | Instructor   **Jan. 2021 - Mar. 2022**
- Tutored elementary to high school level students in math up to Calculus BC
- Crafted personalized ACT & SAT math study plans, emphasizing common question types and addressing individual weaknesses

North Carolinian Youth For Education | Advisor   **Aug. 2016 - Aug. 2022**
- Assisted a North Carolina-based 501(c)(3) Tamil youth nonprofit with supplying educational supplies to 400 underprivileged children
- Led virtual English tutoring for 100+ students aged 12-18 at 'Annai Illam' after-school program in Kilinochi, Sri Lanka

RELEVANT PROJECTS

Wake Smiles Website | Supabase, Next.js, React, Vercel   **Aug. 2023 - Dec. 2023**
- Collaborated with a team of 4 to upgrade the volunteer and admin web applications and database for a local nonprofit dental clinic called Wake Smiles, directly benefiting over 500 volunteers and staff
- Increased volunteer registrations by 35% and introduced key administrative functionalities, resulting in a 40% reduction in data processing time

UNC CSXL Lab | Python, Angular, Typescript, JavaScript, SQL   **Jan. 2023 - May 2023**
- Developed a dynamic, full-stack website for the CSXL Lab leveraging custom APIs to facilitate database management of events and student profiles for streamlined event management and student registrations
- Implemented comprehensive admin features for event creation, editing, and deletion as well as authentication

Akari Puzzle Game | Java, JavaFX   **Aug. 2022 - May 2022**
- Built a GUI application using JavaFX and the Model-View-Controller design pattern to create a logic puzzle game called Akari
- Developed a puzzle-solving algorithm to detect correct configurations of lamps and illuminate puzzle grids accordingly, providing instant feedback on progress

SKILLS

Computer Languages : Python, Java, C, C++, R, SQL, Assembly, HTML, CSS
Tools : NumPy, Pandas, Scikit-Learn, Angular, Node.js, Next.js, Supabase, OpenShift, Kubernetes, Prefect, Excel