Giridhar Nair

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EDUCATION

University of Texas at Dallas — Richardson, TX
Bachelor of Science in Computer Science — *Expected Grad: May 2027*
Relevant Coursework: Discrete Math For Computing I, Computer Science I/II, Differential/Integral Calculus

Udacity — Remote
AI Programming with Python & Business Analytics Nanodegree — *June 2023 - July 2023*
Relevant Coursework: Applied AI with Python, Neural Networks, SQL for Data Analysis, Data Visualization in Tableau, Linear Algebra & Calculus Essentials

EXPERIENCE

Data Analytics Research Intern — June, 2022 – July, 2022
University of Texas at Dallas — *Richardson, TX*
- Leveraged SQL Server Integration Services (SSIS), SQL Server Analysis Services (SSAS), SQL Server Reporting Services (SSRS), and Tableau to develop custom charts, facilitating data-centric business decision-making
- Introduced methods for Data Storage, Processing, Cleansing, and Warehousing in the development of a comprehensive solution showcasing the data lifecycle using leading BI solutions from Microsoft and Tableau
- Delved into Data Mining techniques like Decision Trees and Clusters to gain classification-based insights, supplemented by introductory sessions on the Structured Query Language (SQL)

PROJECTS

YourDailyRundown | *React.js, Python Flask, MongoDB, Chakra UI* | Demo | Github — July, 2023 - August, 2023
- Developed a daily newsletter service using Google's PaLM 2 API, summarizing news content from 20 user-selected interests from the New York Times, and using Twilio's SendGrid email API for email distribution
- Established a robust Flask backend hosted on Microsoft Azure, featuring 3 API endpoints (subscription, un-subscription, and viewing all registered users), managing user data efficiently through MongoDB
- Automated daily email distribution to subscribers using GitHub Actions for scheduled task execution at 8 AM CST and managed email distribution using Twilio's SendGrid email API
- Constructed a responsive React.js frontend with Chakra UI, implementing client-side validation for data integrity and reliable data transfer to the backend system through Axios

CodeTogether | *Reacts.js, Tailwind CSS, Node.js, Docker* | Demo | Github — May 2018 – May 2020
- Developed a web-based, minimalistic collaborative code editor supporting 74 programming languages, leveraging Microsoft's Monaco editor for efficient syntax highlighting for each via the monaco-editor node package
- Integrated real-time document update propagation using Y-Webrtc, an open-source backend solution enabling appends of up to 6000 characters in just 1 ms, deployed through Heroku
- Utilized Axios to send HTTP requests to the JDoodle REST API for code compilation, achieving an average latency of 1,508ms

A* Algorithm Visualizer | *Java* | Demo | Github — *April 2023 - May 2023*
- Visualized the A* algorithm on a 15 by 11 grid with 4 functionalities: adjustable speed, interactive obstacle addition, start/stop/pause controls, and sound effects using the Java.awt, Javax, and Java Swing libraries
- Implemented a dark mode theme for the visualizer through integration with FlatLaf, an open-source cross-platform light-weight (800 KB) Look and Feel library for the Java Swing framework

Pong Game AI | *Python* | Demo | Github — *July 2023*
- Utilized the NeuroEvolution of Augmenting Topologies (NEAT) algorithm, via the neat-python library, to train 3 AI agents with varying difficulty configurations and training generations in a Pygame-based Pong game

TECHNICAL SKILLS

Languages: Python, Java, Javascript, SQL, C++, HTML/CSS
Frameworks and Libraries: React.js, Flask, Node.js, Tailwind CSS, ChakraUI, TensorFlow, PyTorch, NumPy, Pandas, Matplotlib, Java Swing, Java.awt
Developer Tools/Databases: Git, Github, MongoDB, Amazon Web Services (AWS), Google Cloud Platform (GCP), Firebase, Heroku, Github Actions, Vercel, PythonAnywhere, Tableau