Dhanush Chilakala

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EDUCATION

Virginia Tech — Blacksburg, VA
Bachelor of Science in Computer Science, Computational Modeling & Data Analytics — *Aug. 2024 – May 2028*

EXPERIENCE

Sustainable Food Manufacturing Research Team — January 2025 - May 2025
Provisur — *Blacksburg, VA*
- Worked under Provisur engineers and collaborated with research teammates to analyze industrial food processing equipment performance, focusing on sustainability and efficiency.
- Performed data acquisition and statistical analysis, and developed graphs and visualizations to identify patterns in hydraulic press energy usage and material properties of pork belly alternatives.

VTHacks — September 2024
VTHacks — *Blacksburg, VA*
- Built a Next.js and MongoDB based app that uses university food APIs to create a filterable system, allowing users to sort meals by time of day, proteins, calories, fats, and carbs for personalized nutrition access
- Competed against 600+ participants at VT Hacks, working closely with 3 teammates to contribute to both frontend and backend development, ensuring smooth integration and functionality across the app's features

HackTheChains — April 2024
SMU Blockchain Club — *Dallas, TX*
- Won 1st place in the Arbitrum track at SMU's HackTheChains Hackathon, competing against 100+ participants, by collaborating with a programmer and 2 business analysts to develop BountyBlock, a platform that connects skilled 3rd world developers with tech companies
- Developed BountyBlock's smart contract using Solidity to enable secure, transparent, and easily convertible transactions between companies and freelancers, utilizing stablecoins such as USDC
- Designed & implemented BountyBlock's user-friendly UI/UX using Figma, Next.js, and TailwindCSS, ensuring an intuitive and engaging user experience

AIFAHacks - AI Hackathon for Social Good — September 2023
AI For All Club — *Richardson, TX*
- Won 1st place overall at the AIFAHacks AI Hackathon for Social Good, competing against 200+ participants, by collaborating with 2 programmers to develop a website using Next.js that provides personalized advice on reducing users' carbon footprints based on their responses to a questionnaire
- Developed a Python API that leverages a Python Wrapper to connect the frontend with Google BARD, enabling seamless integration between the front end and the advanced LLM

PROJECTS

Wordle Solver | *Javascript* — April 2024
- Developed a comprehensive 5-letter word dataset by utilizing a Wikipedia dump to sort words by letter commonality resulting in an accurate and efficient analysis for Wordle
- Identified the optimal starting word for Wordle by analyzing letter frequency data leading to improved initial guesses and gameplay strategy

WDLM Discord Bot | *Javascript, Discord.js, Next.js* — January 2024
- Achieved efficient and cost-effective file storage by creating a Next.js application that splits and uploads files to Discord in 25MB parts resulting in the elimination of the need for additional physical storage hardware
- Implemented a file download feature by reassembling split files and enabling user downloads through the app leading to seamless access to stored files

TECHNICAL SKILLS

Languages: C/C++, HTML/CSS, Java, JavaScript, Typescript, Python, R
Frameworks & Libraries: React, Next.js, Vite, Sockets.io, NumPy, Pandas, Matplotlib, OpenMP, CUDA, MPI
Databases: MongoDB, PostgreSQL
Developer Tools: Docker, Eclipse, Git, Google Cloud Platform (GCP), IntelliJ, Neovim, NPM, VS Code