

# Dhanush Chilakala

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## EDUCATION

### Virginia Tech

*B.E. Computer Science, B.S. Computational Modeling & Data Analytics*

Blacksburg, VA

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, Python, R

**Frameworks & Libraries:** Astro, Better-Auth, Clerk, Firebase, Material-UI, Next.js, React, Sockets.io, Vite, NumPy, Pandas, Matplotlib

**Databases:** MongoDB, PostgreSQL

**Developer Tools:** Docker, Eclipse, Git, Google Cloud Platform (GCP), IntelliJ, Neovim, npm, VS Code