Zade Mahayni

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LinkedIn | GitHub

EDUCATION

University of Tulsa **Tulsa, Oklahoma**
B.S. Computer Science (Mathematics Minor), B.S. Cyber Security GPA: 3.817 May 2026 (expected)

TECHNICAL SKILLS

- **Languages:** Python, JavaScript/TypeScript, C, C#, Java, SQL, Bash
- **Frameworks and Tools:** React, Next.js, Flask, Supabase, Git, PyTorch, AWS, .NET, Azure, Angular
- **Areas**: Machine Learning, Web Development, Reinforcement Learning, Cloud Services, IoT Security

WORK EXPERIENCE

University of Oklahoma − Research Intern **June 2023 − August 2023**
- Analyzed RWIS highway **monitoring system power consumption** using solar optimization models
- Worked on creating a model using **statistical methods** to predict energy consumption in the future

University of Tulsa − Research Intern **April 2024 − August 2024**
- Conducted research on smart environments by **analyzing network traffic** across diverse IoT devices, **improving device fingerprinting accuracy** and supporting ERDC's cybersecurity models
- Worked on a team to develop fingerprinting methods using **nmap, pof, and satori** to analyze **DHCP** signals, **increasing detection precision** over devices in the environment

University of Tulsa − Research Intern **May 2025 - Now**
- Developed a **Python pipeline** to scrape and **preprocess SEC EDGAR filings**, enabling automated extraction of cryptocurrency-related texts from **thousands of documents**
- Creating **classifications** of company cryptocurrency discourse using **grounded theory** to train and **evaluate NLP on filings**

KEY PROJECTS

Whooping Crane Conservation Project:
- Trained and deployed a wildlife **image classifier** achieving **92% recall across 10k+ images** using **PyTorch and AWS**
- Won 2nd Place in the Pelton Endowed Award for measurable environmental impact

ByteRank:
- Building a competitive coding leaderboard with real-time scoring based on **GitHub activity with Next.js, TypeScript, Supabase**
- Designed **dynamic group** competitions with role-based accesss control and secure invitation system using **RLS policies**
- Creating a community where **solo developers** can share ideas and compete with their friends

DocSmith:
- Engineered a **browser-only AI** document assistant using **Next.js + Chrome on-device APIs** for zero-cost inference
- Implemented client-side file parsing, improving user **privacy and security**

Rock-Paper-Scissors:
- Programmed **STM32 LCD + keypad** interface enabling real-time gameplay and **hardware-driven** input handling

Pokémon VGC Reinforcement Learning Agent:
- Building a **self-play RL agent** to achieve competitive ELO in PokemonVGC via **custom reward shaping and SB3**