VED TIWARI

302-563-1770 | vedt2@illinois.edu | linkedin.com/in/ved-tiwari | github.com/ved-tiwari | github.com/portfolio

EDUCATION

University of Illinois Urbana-Champaign   Urbana-Champaign, IL
Bachelor of Science in Computer Engineering   *Expected Graduation: Dec 2026*

EXPERIENCE

Illinois Electric Motorsports (FSAE Team)   Jun. 2024 – Present
Embedded Software Engineer Project Lead   *Champaign, IL*
- Optimized **BMS firmware** by leveraging **LTC6811-1 ICs**, **CAN bus protocols**, and **Embedded C** for enhanced data throughput and communication reliability
- Reduced **system latency** from **1.3 seconds** to below **100 ms** by streamlining existing **SPI/L2C** codebase
- Wrote **unit tests** for all functions to validate robustness and functionality
- Ensured seamless integration and reliability, maintaining version control through **Git**

JPMorgan Chase & Co.   Jun. 2024 – Aug. 2024
Software Engineering Intern   *Wilmington, DE*
- Engineered a **full-stack developer tool** to optimize **application instance migration** across **cloud pools** within the **Cloud Foundry** environment, reducing migration time by **73%**
- Developed a **Java SpringBoot API** to automate the migration process, minimizing developer overhead, and designed a **UI** with **TypeScript**, **CSS**, and **React**
- Migrated **22%** of organizational applications, enhancing operational efficiency for **Cloud Foundry developers** and **app managers**

JPMorgan Chase & Co.   Jun. 2023 – Aug. 2023
Backend Software Engineering Intern   *Wilmington, DE*
- Developed a **batch cloud application** using **AWS** to establish connectivity between **Amazon S3** and **DynamoDB** services
- Facilitated efficient **data transfer and synchronization** within the **cloud environment**, minimizing time
- Utilized **relational NoSQL strategies** for mapping **S3 JSON file data** onto **DynamoDB's metadata**
- Orchestrated **Terraform ArtifactID creation** and validated application functionality through **Jenkins CI/CD**

PROJECTS

Generative Twitter | *Undergraduate Research*   Jan. 2024 – Jul. 2024
- Investigated the impact of **generative large language models (LLMs)** such as **LLama**, **GPT-4**, and **Bard** on **user-generated content** in the **social media space**, focusing on **user interactions** and **misinformation**
- Assisted mentor to conduct **qualitative and quantitative research**, surveying **50+ users** to understand **behavior patterns** when exposed to **AI-generated false information**
- Presented findings to an audience of **100+ attendees** at the **Illinois research symposium**

Thrive AI (Mobile App) | *Python, Flask, JavaScript, Bootstrap, Chart.JS*   Jun. 2022 – Sep. 2022
- Built a **mobile app** with **custom machine learning models** to **predict air quality trends** and offer **insights**
- Developed **AI model** in **Python** and **SciKitLearn** with **historical air quality data** to enhance **AQI forecast accuracy** and support **proactive health measures**
- Integrated **Google Maps** and **OpenWeather API** to deliver **real-time location-based air quality** and **weather**
- Enabled **data-driven insights** by **visualizing pollutant data** and **air quality metrics**, increasing **user engagement**

TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL (Postgres), JavaScript/TypeScript, HTML/CSS
Frameworks and Libraries: PyTorch, TensorFlow, OpenCV, Scikit-Learn, React, Spring Boot, Flask, JUnit
Web Technologies: HTTP, HTML/DOM, JavaScript, CSS, AJAX, Web Services, SOA, REST APIs, JSON, XML
Cloud Services: AWS (EC2, S3, DynamoDB), Terraform, Cloud Foundry, Google Cloud Platform (GCP), Azure
Databases: PostgreSQL, MySQL, MongoDB, DynamoDB
Data Science/Machine Learning Tools: Jupyter Notebook, Pandas, NumPy, Matplotlib, Seaborn, SciPy, Keras
DevOps and CI/CD: Docker, Kubernetes, Jenkins, Git, GitHub Actions, Travis CI