Praneeth Rangamudri

pranmudri@gmail.com | www.linkedin.com/in/pranmudri |jrang3.github.io

EDUCATION

University of Illinois Urbana-Champaign **Champaign, Illinois**
Master's in Computer Science *Dec 2025*
B.S. in Computer Science and Statistics *May 2024*

- **GPA:** 3.93/4.0, *Dean's List*
- **Related Coursework:** Data Structures & Algorithms, Database Systems, Machine Learning, Numerical Methods, Game Development, Computer Graphics, Computational Photography, Scientific Visualization

WORK EXPERIENCE

Regeneron Pharmaceuticals **Rensselaer, NY**
Data Engineer *May 2025 – Current*

- Writing **SQL** queries to extract **ETL job metrics** from **SQL Server,** enabling detailed analysis of pipeline health and reliability
- Utilizing **Power BI** to design interactive dashboards to visualize **ETL trends across systems**, improving visibility and supporting **data-driven operational decisions**
- Implementing an automated alerting system in **Python** to notify stakeholders of ETL anomalies, **reducing response time and boosting reliability**

UIUC's Stu/dio **Champaign, IL**
Software Engineer *May 2024 – Current*

- Developing a **VR archaeological simulation** in **Unreal Engine and C++**, featuring **110+ virtual artifacts**
- Facilitating hands-on learning in virtual archaeology, enabling students to perform intricate tasks such as site mapping, digging with ground-penetrating radar, and meticulous data recording, mirroring professional archaeological fieldwork
- Reducing field school costs by **$500–$5,000** through a virtual alternative to traditional fieldwork

UIUC Department of Civil and Environmental Engineering **Champaign, IL**
Research Assistant *Feb 2025 – May 2025*

- Developed an **AI Visualizer application** combining 3D model rendering **(Three.js, HTML, CSS)** with AI prediction backend **(Python, Flask, PyTorch)**
- Built an interactive system enabling users to select among four vehicles and view real vs. AI-predicted pressure values on the vehicles in real-time
- Achieved **78.3%** query interpretation accuracy by integrating an **LLM (Ollama 3.2)** to analyze **JSON-based simulation data** through an interactive chatbot system

UIUC's Immersive Learning Lab **Champaign, IL**
Software Engineer *May 2023 – Dec 2023*

- Developed a **VR Faraday's Law simulation** in **Unity and C#** to enhance learning for **30+ students** in Fields and Waves, leading to an average increase of **one letter grade**
- Collaborated with a team to design and integrate interactive questions into the app, boosting **engagement** and contributing to a **20% improvement in course retention**

PROJECTS

Smart Reply Gmail Plugin Project *April 2025 - May 2025*

- Collaborated on an **AI-powered Gmail add-on** using **Google Apps Script** and **Gemini API** to generate context-aware replies
- Developed **prompt assembly and thread extraction algorithms**, improving relevance

Othello Recognition Project *April 2025 - May 2025*

- Developed an **Othello board piece detection system** with 3 teammates using **Python, OpenCV, Fast Line Detector, and Hough Transform**
- Achieved **94% classification accuracy** with **Gaussian blurring and homography**
- Improved extraction via **dynamic thresholding** and **k-means clustering**

SKILLS

Programming: Python, WebGL, Java, JavaScript, C++, C, C#, and MySQL
Libraries: Numpy, PyTorch, Open CV, Flask, and Pandas
Tools: Unreal Engine, Unity, and Microsoft Visual Studio