

Manav Sankaran

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WORK EXPERIENCE

Hyperlink

Champaign, IL

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- Orchestrated the deployment and management of a Kubernetes (K3S) cloud infrastructure across **3** AWS availability zones, utilizing Pulumi for automation and PostgreSQL RDS for state management, resulting in a **35%** improvement in GPU resource scalability.
- Configured AWS Gateway and Ingress controllers within the Kubernetes environment to manage and optimize load balancing across **10+ worker nodes**, facilitating efficient access to GPUs for tasks like AI model training, reducing processing time by **20%**.

National Center for Supercomputing Applications

Champaign, IL

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- Executed efficient ticket management using JIRA, ensuring **95%** of technical issues were resolved within SLA, with over **200 tickets** handled monthly, ensuring accurate documentation and effective communication with employees affiliated with the NCSA.
- Maintained comprehensive technical documentation, including system operations, troubleshooting procedures, and best practices, reducing troubleshooting time by **20%** and ensuring operational consistency.

Traydstream Ltd.

London, UK

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- Gained practical knowledge in implementing diverse encryption policies to ensure the secure transmission of financial documents both within and outside a prominent FinTech company's pipelines.
- Conducted in-depth research on the impact of global compliance regulations concerning the digitization of trade documents, analyzing over **150 pages** of regulatory frameworks and contributing to **3 comprehensive compliance strategies** for international trade partners.
- Collaborated with cross-functional teams to assess cybersecurity protocols across **5 key departments**, ensuring **100%** alignment with industry best practices and regulatory requirements, reducing potential compliance risks by **15%**.

PROJECTS

Options Pricing Model –

- Developed a neural network model to predict option trading volumes, utilizing **3 years** of historical data from the Chicago Board Options Exchange (CBOE), designed a forecasting framework that achieved a **12% improvement in accuracy** compared to traditional statistical models.
- Implemented advanced data preprocessing techniques, including feature engineering, and optimized the model using the Adam optimizer, reducing Mean Squared Error (MSE) by **15%**, and delivering predictions for future trading volumes.

Desktop Search Application –

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- Developed a desktop search application using NLP and Large Language Models (LLMs) with the help of Python libraries like LangChain to interpret user queries and retrieve files based on relevant content and metadata.
- Applied critical thinking and problem-solving skills to address challenges related to NLP model integration, ensuring the application's reliability and accuracy in interpreting complex user queries.

FindR API –

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- Engineered the FindR API to aggregate real-time data from popular social media platforms like Reddit and Twitter, employing web scraping techniques, enabling the delivery of comprehensive insights into market trends and consumer behaviors.

LEADERSHIP EXPERIENCE

UIUC Squash Club

- Promoting a healthier lifestyle through the sport of Squash as the Founder of the Squash Club @ UIUC while training players within the university to participate in CSA (College Squash Association) tournaments.

Pledge Officer on Duty (POD) – Entrepreneurship and Innovation

- Led my school in promoting entrepreneurship through events like the Annual Innovation Mela where local businessman reviewed projects and presentations regarding possible innovations in various sectors such as Agriculture, Medicine and Education.

EDUCATION

University of Illinois Urbana-Champaign – Grainger College of Engineering

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Relevant Coursework:

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SKILLS & INTERESTS

Languages & Libraries: C/C++, Python (Pytorch, LangChain, Hugging Face, Django), Verilog, JavaScript (Node.js, React.js), Java, HTML5, CSS3, SQL, Rust (Tauri), Container/Cluster Management (Kubernetes, Docker), AWS, Pulumi.

Hobbies & Interests: Natural Language Processing, Cyber-Security, Artificial Intelligence, Squash, Soccer, Cricket, Gaming, F1.