Farhan Ahmed

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EXPERIENCE

CCC Inteligent Solutions   **May 2025 – August 2025**
Workflow Software Engineer Intern

- Developed a configuration management system using VueJS, TypeScript, and Pinia that streamlined client setup, enabling real-time customization and deployment of customers' mobile app experience.
- Collaborated with design team to implement a dynamic UI configuration with toggleable features, conditional form fields, and workflow specific navigation to enable non-technical users to customize app behavior independently, improving user autonomy and enhancing overall operational efficiency.
- Increased mobile application accessibility score by 48% through implementation of WAI-ARIA guidelines, semantic markups, and keyboard navigation allowing for better compliance with ADA requirements creating a more inclusive user experience.

EDUCATION

University of Illinois at Urbana-Champaign   **December 2025**
Grainger College of Engineering
Bachelor of Science in Computer Science

TECHNOLOGIES

Programming Languages: Python | JavaScript | C/C++ | SQL | HTML5 | CSS3 | Java
Frameworks: React.js | Next.js | FastAPI | Flask | Node.js | Material UI (MUI)
Data Science: NumPy | Pandas | Matplotlib | NLTK | Gensim (NLP) | Scikit-learn
Databases & Tools: MongoDB | PostgreSQL | Firebase | Neo4j | Apache Kafka | Git/GitHub | Vercel | Render

PROJECTS

CODE NAMES SPYMASTER | [GitHub](#)
Full-stack application that generates optimal semantic clues for the board game Codenames using NLP vector modeling
Python | React | FastAPI | Numpy | GloVe (NLP) | Git | Vercel | Render

- Architected a semantic search engine using Python and GloVe word embeddings (300-dimensional vectors) to calculate cosine similarity and identify high-value word associations.
- Developed a RESTful API with FastAPI to serve real-time clues, implementing custom filtering logic to strictly avoid "Assassin" words and ensure game rule compliance.
- Built a responsive frontend using React and Vite, featuring a dynamic 5x5 grid with real-time state management.
- Optimized deployment pipeline by implementing binary model serialization to reduce server startup time by 80%, successfully deploying to Render and Vercel.

UIUC RSO | [GitHub](#)
A dynamic web application providing comprehensive information on Student Organizations for incoming students.
Python | Flask API | SQLAlchemy | Pandas | TypeScript

- Leveraged SQLAlchemy to design a robust database schema to ensure efficient data management and accessibility for the application backend as well as migrated bulk data into database tables using Python.
- Developed robust backend using Python and Flask to ultimately implement full CRUD functionality and design RESTful API routes to deliver data from databases to the frontend.

PANTRY-TRACKER | [GitHub](#)
A Website-based project that allows users to keep track of items in their pantry using user input and image recognition.
React | Firebase | OpenAI API | MUI | JavaScript

- Connected a Firebase database to the website to help keep track of a user's items in their pantry along with the count of the items, which can be adjusted by the user.
- Integrated OpenAI API to connect GPT-4oMini model to allow for image recognition making it easier for the user to add items to their list.
- Deployed website on Vercel and built a user-friendly React interface with MUI that enables seamless list editing