Saketh Bireddy

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EDUCATION

PURDUE UNIVERSITY West Lafayette, Indiana
Bachelor's of Computer Science Expected May 2026

EXPERIENCE

MINGLEY Remote
Software Engineer Intern June 2024 - Present

- Facilitating discussions on system architecture for mobile and desktop applications, engaging with design, development, and product teams to ensure alignment post-completion of core features and designs; established a waitlist of over 100 users
- Designed and prototyped over 10 user interfaces by creating low to high-fidelity versions of mobile and community pages using Figma, improving the usability and aesthetics of the application
- Actively developing the community page of the mobile application using React Native for iOS and Android, CSS, React Hooks, and leveraging Echo for compiling and building on Windows OS to ensure cross-platform compatibility and robust performance
- Integrating backend services using Supabase and a REST API written in C# and .NET, reducing error rates by 20% and ensuring reliable data flow and system stability

JOHN DEERE West Lafayette, Indiana
Undergraduate Data Science Researcher January 2024 - May 2024

- Collaborated with a team to use Python for advanced machine learning and time series data analysis, achieving a precise 12-month demand forecasting model with an average NRMSE of 0.4 for over 100,000 John Deere part-location combinations
- Employed advanced data cleansing and exploratory data analysis techniques using Pandas to dissect data, resulting in a significant reduction in inventory discrepancies and costs
- Leveraged machine learning models like Seasonal Naive, S-ARIMA, and Exponential Smoothing and calculated numerous metrics such as NRMSE, RMSE, and ME using NumPy; data was visualized using matplotlib

RESEARCH STUDY Remote
AI Researcher May 2022 - July 2022

- Worked with ISEF Regeneron Finalist Shreya Amalapurapu on link prediction algorithms in drug and disease associations, achieving 90% accuracy in classifying drug-disease pairs using the ComplEX algorithm within the StellarGraph framework
- Developed and processed graph data by extracting and formatting information from DrugBank and Stanford datasets, utilizing Pandas for data manipulation and rdkit for molecular fingerprint analysis
- Trained and validated the model using TensorFlow's Keras API, optimized with Adam optimizer and Binary Cross Entropy loss, along with early stopping to prevent overfitting; published the research in the IYRI Computer Science Journal

PROJECTS

SMART PANTRY MANAGEMENT SYSTEM June 2024 - July 2024

- Developed a pantry management application with Next.js, Material UI, and Firebase, featuring user-friendly interfaces for adding, deleting, and updating items
- Implemented advanced search/filter functionalities and deployed the application using Vercel with CI/CD pipelines
- Integrated AI capabilities for image classification and recipe suggestions using GPT Vision API and OpenAI API

PURDUE HACK THE FUTURE INTERVIEW SYSTEM September 2023 – May 2024

- Programmed a web application for the club's executive board of 5 members to streamline interview processes, utilizing HTML, CSS, React.js for the frontend, and Node.js, Express, and MongoDB for the backend
- Integrated advanced form features, including conditional logic, status-based sorting, detailed filtering, and single-response-per-email verification, enhancing interview scheduling and response breakdown

STOCK SENTIMENT ANALYSIS PREDICTOR July 2023 - August 2023

- Leveraged Python and Pandas to preprocess data from 500 financial news articles and social media posts, employing NLP techniques such as tokenization and stemming to clean and structure data
- Developed and trained an LSTM neural network for sequence prediction, achieving 85% accuracy in stock value predictions
- Fine-tuned the BERT model using the PyTorch Hugging Face library, optimizing various hyperparameters to attain nearly 95% accuracy in sentiment analysis for financial forecasting

SKILLS

- Languages: Java, Python, JavaScript, HTML, CSS, C, R, C#
- Technologies: Neural Networks, LSTMs, NLP, Supabase, .NET, Pandas, Next.js, Firebase, Matplotlib, NumPy, React.js, Node.js