

# Akshar Raikanti

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## EDUCATION

### Purdue University

*Bachelor of Science, Computer Science*

*Bachelor of Science, Artificial Intelligence*

**Relevant Courses:** Analysis of Algorithms, Systems Programming, Introduction to Artificial Intelligence, Data Structures and Algorithms, Computer Architecture, Discrete Math, Programming in C, Object Oriented Programming

**Skills:** Python, Java, C, C++, C#, SQL, R, Assembly (x86-64), JavaScript, Relational Databases, NoSQL Databases, Machine Learning, Artificial Intelligence, Computer Vision, Natural Language Processing

## PROFESSIONAL EXPERIENCE

### Kohl's – Kohls Technology

Software Engineer Intern

San Ramon, CA

June 2025 – August 2025

- Developed frontend features using Angular (TypeScript) and backend RESTful APIs with Spring Boot (Java), improving application responsiveness by 15% and reducing load times by 5%.
- Enhanced two products: MAP (Merchant Assortment Planning), streamlining vendor order management, and KOO (Kohl's Order Optimization), optimizing distribution logistics, achieving an estimated 20% improvement in delivery efficiency.
- Upgraded services to new KADO (Kohl's Auto DevOps) versions, accelerating CI/CD pipeline deployment speed by 10% through integration with GitLab CI and OpenShift.
- Collaborated in Agile teams, actively participating in sprint planning, daily stand-ups, Jira management, and pair programming to improve code quality.

### Veygo Rentals – Car Rental Service

Full Stack Developer

West Lafayette, IN

August 2024 – May 2025

- Led the development and maintenance of the Veygo Rentals website using React, JavaScript, CSS, Bootstrap, and Tailwind, creating a responsive, user-friendly interface for Purdue University students. Implemented real-time inventory tracking, automated booking confirmations, and multi-tiered user access controls. Built a robust back-end with Node.js and Python, integrating Stripe API for secure payments, and utilized Firebase Authentication for user account management.

### TransSIGHT – Data Consulting Firm

Data Engineering and Machine Learning Intern

San Francisco, CA

June 2024 – August 2024

- Developed an automated end-to-end data pipeline using Apache Airflow, achieving a 30% reduction in ETL processing time, and managed Docker environments, resulting in a 15% improvement in deployment efficiency.
- Built predictive machine learning models (Random Forest, XGBoost) using scikit-learn and PyTorch, increasing transit demand forecasting accuracy by 20%; leveraged AWS (S3, MWAA) for scalable processing, optimized complex SQL queries enhancing database performance by 10%, and created detailed visualizations for actionable insights.

### BASF – Agricultural Chemical Solutions

Machine Learning Research Intern

West Lafayette, IN

August 2023 – May 2024

- Delivered a statistical approach to approximating competitor market share at a granular level. Then leveraged outputs to compute benchmarking analytics for quantifying the accessible market opportunity relative to our competitors.

## PROJECTS

### C++ Shell Implementation

April 2025

- Implemented a custom Unix-like shell in C++ utilizing Lex and Yacc for command parsing, featuring piping, I/O redirection, background execution, environment variable expansion, command and process substitution, wildcard matching (globbing), built-in commands (cd, setenv, printenv, source), advanced terminal line-editing capabilities (history navigation, autocomplete, keyboard shortcuts), and robust signal handling (SIGINT, SIGCHLD) with comprehensive job control and resource management.

### Custom C Compiler to x86-64 Assembly Implementation

December 2024

- Designed and implemented a full-stack compiler using Lex and Yacc for lexical analysis and parsing, performing precise register allocation, and translating source code into optimized x86-64 assembly; supported advanced features including array indexing, pointer arithmetic, dynamic local/global variable management, function calling conventions, control-flow structures (loops, conditionals, break/continue statements), robust error handling, and automated assembly output generation.

### Pantry Tracker App

July 2024

- Created with React and Next.js for real-time data tracking of pantry items. Used Vercel to deploy application. Implemented user authentication and authorization using Firebase Authentication to ensure secure access to each user's data. Implemented a camera system to link items with images and using computer vision tools (OpenCV) to automatically detect objects in images to add to the list of items.

### AI Customer Support System

August 2024

- Engineered a sophisticated AI-driven customer support system utilizing Llama 3.1, Groq AI, Next.js, and AWS, enabling automated, adaptive responses to a wide range of customer inquiries. The system integrates with multiple APIs to enhance functionality and dynamically adjusts to various prompts and inputs, effectively routing specific queries to appropriate services.

### Machine Learning Assisted Professor Tracking App

September 2024

- Developed an app using RAG using Pinecone, Llama 3.1 through Groq AI, and Vectors to help students choose classes based on professors' past reviews. Devised a weighted review system through Pinecone to recommend professors to students. Utilized sentiment analysis techniques to provide deeper insights into professor reviews, helping students make more informed decisions.

### AI Flashcard App

September 2024

- Designed an app with Stripe API payments and Llama 3.1 content to help users study efficiently. Used Firebase and Clerk to store user specific information and authentication. Integrated adaptive learning algorithms to customize flashcard difficulty based on user performance and learning speed.