Shubham Jain

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Education

- **Purdue University - West Lafayette** *Aug 2023 - Dec 2026*
  B.S in Computer Science, B.S in Artificial Intelligence, Minor in Mathematics GPA: 3.83
  Relevant coursework: Data Structures & Algorithms, Computer Architecture, Systems Programming, Discrete Mathematics, Multivariable Calculus, Linear Algebra, Data Mining and ML

Experience

- **Indiana Fever (with The Data Mine)** *Aug 2024 - Present*
  Machine Learning Lead: Undergraduate Data Science Researcher Indianapolis, IN
  - Led development of supervised ML models for player performance prediction across global leagues with 80% accuracy.
  - Engineered feature extraction pipeline in PySpark to process 500,000+ player statistics using Databricks Lakehouse.
  - Reduced prediction error by 23% through hyperparameter optimization and cross-validation techniques.
- **Elastik Teams** *Jun 2022 - Aug 2022*
  Software Engineering Intern Remote
  - Developed RESTful APIs using Node.js and Express, demonstrating rapid adaptation to new technologies.
  - Enhanced security and reduced login time by 20% through implementation of HubSpot OAuth 2.0 authentication.
  - Optimized microservices architecture and implemented CI/CD pipeline in collaboration with senior engineers.
  - Achieved 98% code coverage through development of comprehensive test suite with 30+ unit tests.

Projects

- **Learnify**
  Gemini-powered study helper for students
  - Architected an educational platform implementing custom prompt engineering techniques for content generation.
  - Integrated Google Gemini API with Node.js, automating study content creation and boosting productivity by 60%.
  - Helped assist students in creation of flashcards, study guides, and practice tests.
  - **Tech Stack**: React, Node.js, HTML/CSS/JS, Google Gemini API.
- **Compiler**
  SimpleC compiler built with C, assembly, lex, and yacc
  - Developed a compiler for SimpleC language using C, implementing lexical analysis with lex and parsing with yacc.
  - Engineered code generation phase that translated abstract syntax trees into optimized x86_64 assembly code.
  - Implemented semantic analysis to catch type errors and validate program structure at compile time.
  - **Tech Stack**: C, Assembly, Lex, Yacc, Linux/Unix, Compiler Design.
- **Sort-o-Matic**
  AI-powered garbage sorting device with full-stack website
  - Built a camera-based device to sort garbage (trash/recycle/compost) in real time with 85% accuracy using CNNs.
  - Developed a full-stack website to control the device and track waste management with real-time analytics.
  - Achieved 3rd place at EcoHacks, competing against 600+ participants.
  - **Tech Stack**: Python, TensorFlow, Keras, CNN Architecture, HTML/CSS/JS, Firebase.

Technical Skills and Interests

- **Technical Skills**: C, C++, Java, Python, Assembly, R, HTML/CSS/JS, React, Node.js, SQL, AWS, Firebase, Azure, TensorFlow, PyTorch, Spark, Linux/Unix, Full-Stack Development, ML Engineering, Systems Engineering.
- **Interests**: Generative AI, Embedded Systems, Semiconductor Technology, Robotics, Computer Vision, FinTech.

Certifications

- IBM AI Engineering Professional
- Generative Deep Learning with TensorFlow
- AWS SkillBuilder Machine Learning