

YASH GULATI

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EDUCATION

University of Illinois at Urbana-Champaign

B.S. Computer Engineering | Minor in Statistics

Tech. GPA: 4.0 | GPA: 3.96

Expected Graduation: May 2029

- **Honors:** James Scholar, Deans List (FA25, SP26), Tau Beta Pi National Engineering Honor Society Invitee, Awarded Grainger Engineering Continuing Merit-based Scholarship
- **Courses:** Object-Oriented Programming with Java (Honors), Object-Oriented Programming with C++ (Honors), Electronics & Circuits I, Digital Logic & Computer Systems I, Discrete Structures, Data Structures & Algorithms (Honors), Autonomous Robotics Project, Linear Algebra.

EXPERIENCE

Illini Solar Car Team

Aug 2025 – Dec 2025

Strategy & Telemetry Team Member

Champaign, IL

- Identified performance anomalies and filtered outliers by processing 240,000+ rows of battery telemetry (voltage, power, current) using **Python (Numpy, Pandas, matplotlib) and SQL**
- Time-aligned telemetry streams from sensors with differing sampling rates to enable synchronized analysis across MPPT data.

NOBE Illinois Chapter

Aug 2025 – Dec 2025

Consultant for Livesky

Champaign, IL

- Researched the Drone market in the U.S., including competitors, market growth, and **SWOT analysis**
- Brainstormed various proposals for **market entry** into the U.S., including EMS, Firefighter, Agriculture and Construction drone

Fiverr.com

Oct 2021 – Aug 2024

Web Developer

Jakarta, ID

- Scaled web presence for **50+ clients** by shipping full-stack web applications with **HTML/CSS/React.js**, maintaining 4.9/5 rating.
- Built & managed 7 production-grade landing-page, single-page, and multi-page websites for founders and independent artists.
- Owned end-to-end deployment pipeline – **Figma** for design, **Git** for version control and **Vercel** for hosting with custom domains.

PROJECTS

ArXiv Research AI with RAG

Python | LangChain | HuggingFace | Gemini API

- Built a RAG pipeline ingesting over **3.1 million arXiv papers** via Kaggle, vector embedding each paper with metadata into a ChromaDB database; calling Gemini API to respond with citation-grounded answers based on the top 4 relevant papers.
- Implemented two-stage retrieval – first a semantic search over abstract embeddings to identify relevant papers, then full-text PDF-to-markdown parsing using **PyMuPDF** and **PyMuPDF4llm** at query to give Gemini full access to text from research papers.
- Engineering a citation-grounding system prompt to enforce claim-level attribution and explicit refusal on insufficient context to reduce hallucinations and biases – as measured by **RAGAS** and **BEIR** scientific benchmarks for baseline scores.

TECHNICAL SKILLS

Languages: Python, Java, C++, C, Javascript (React.js), SQL, HTML, CSS, Assembly

Developer Tools: PyTorch, TensorFlow, Scikit-Learn, NumPy, Pandas, LangChain, Hugging Face, LLM APIs (ChatGPT, Gemini, Claude, Ollama),

Libraries/Frameworks: Git, AWS S3, MongoDB, ChromaDB, Gradio, RAGAS, Claude Code, Codex, Unity, System Design