

Anuja Anant Shukla

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SUMMARY

Computer Engineering student with cross-disciplinary experience spanning embedded systems, digital hardware design, and AI/software development. Comfortable moving between low-level firmware and hardware description languages (C, ARM Assembly, SystemVerilog) and modern software/AI stacks (Python, LLM pipelines, full-stack web apps). Seeking a Computer Engineering, Electrical Engineering, or Software/AI Engineering role where I can apply both hardware and software problem-solving skills.

EDUCATION

B.S. in Computer Engineering, Minor in Mathematics

University of Illinois Chicago

Aug 2024 – Present

Chicago, IL

GPA: 3.55/4.0 | Relevant Coursework: Computer Architecture, Circuit Analysis, Digital Logic Design, Embedded Systems, Electronics, Data Structures & Algorithms, Discrete and Continuous Signals & Systems

TECHNICAL SKILLS

Languages: C, C++, Python, ARM Assembly, SystemVerilog/Verilog, JavaScript, SQL

Hardware & Embedded: GPIO, Timers, PWM, Interrupts, ModelSim, FPGA prototyping, Oscilloscope/JTAG debugging

Software & AI Tools: Flask, Streamlit, n8n, Gemini/Groq/LLM APIs, LlamaIndex, FAISS, Chroma, PyMuPDF, pytest, Git

EXPERIENCE

AI / Data Automation Extern — Pfizer Supply Chain Document Processing Externship (Remote)

Jun 2026 – Aug 2026

- Built Python pipelines (PyMuPDF, pdfplumber) and OCR workflows (Tesseract, PaddleOCR, EasyOCR) to extract and structure data from pharmaceutical PDFs and scanned supply chain documents.
- Developed Retrieval-Augmented Generation (RAG) pipelines with LlamaIndex and vector databases (FAISS, Chroma), integrating and comparing Gemini, Mistral, and Phi-2 for document Q&A.
- Designed and deployed an interactive document-analysis chatbot in Gradio for real-time PDF upload and querying.

AI Automation Extern — Wayfair AI Agent Engineering for Business Intelligence Externship

Nov 2025 – Jan 2026

- Built AI-powered workflow automations with n8n and Google Gemini to streamline trend discovery and product research, scraping competitor sites and social media to identify emerging design trends.
- Analyzed bestseller attributes to surface consumer demand patterns and built a live analytics dashboard in Google Sheets integrating trend, competitor, and AI-insight pipelines.

PROJECTS

Morse Code Translator System | Embedded Systems (C, ARM Assembly)

- Developed an embedded Morse code translator integrating GPIO, timers, PWM, and interrupts on an ARM-based microcontroller, with timer-based pushbutton input decoded to a 7-segment display and serial terminal.
- Designed the hardware interface and software state machine; integrated a PWM buzzer, RGB LED, and PIR sensor for real-time feedback and automatic sleep/wake power management.

MIPS Single-Cycle CPU Design | SystemVerilog, ModelSim

- Designed and implemented a 32-bit single-cycle MIPS CPU in SystemVerilog, building the datapath and control unit to support lw, sw, beq, add, sub, and, or, and slt.
- Verified functionality in ModelSim via waveform analysis and MIPS assembly test programs, debugging control logic, ALU operations, and datapath connectivity.

PawPal+ — AI-Enhanced Pet Care Scheduler | Python, Streamlit, Groq API, pytest

- Built a full-stack scheduling app (OOP, dataclasses) generating daily task plans under time-budget/priority constraints, with a Streamlit UI, CLI, and an AI agent (Groq/Llama 3.3) that resolves scheduling conflicts via a plan→act→check loop with bounded retries and safe fallback.
- Wrote a 17-test pytest suite plus a custom evaluation harness covering edge cases and adversarial AI outputs, achieving a 100% pass rate.

ATS Resume Analyzer | Python, Flask, HTML/CSS/JavaScript, PyMuPDF

- Built a full-stack web app that scores PDF resumes for ATS compatibility using weighted skill/job-description matching, with an interactive Chart.js dashboard and downloadable PDF reports via ReportLab.

RESEARCH

Undergraduate Research Assistant — Neural Networks for Handwritten Math Recognition

Jan 2026 – May 2026

- Credit-bearing research exploring dynamic optical character recognition of handwritten mathematical notation using neural networks, converting handwriting into digital, typeset-ready text.

Honors & Languages

- Certifications: Udemy Learn Python from Scratch, Microsoft AI skills fest Badge, CodePath AI Engineering
- Languages: Marathi (Native), Hindi (Fluent), French (Conversational)
- Honors: Seal of Bilingualism in Hindi, Dean's List (Spring 2025, Spring 2026)