Sahil Khunt

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EDUCATION

University of Illinois Urbana-Champaign <div align="right">GPA: 3.82/4.00</div>
Bachelor of Science in Computer Science, Minor in Statistics <div align="right">*Expected May 2027*</div>

Relevant Coursework: Data Structures, Discrete Structures, Multivariable Calculus, Linear Algebra, Algs & Models of Comp, Database Systems, Computer Architecture, Prob & Stat for CS

EXPERIENCE

Software Engineering Researcher <div align="right">Sept 2025 – Present</div>
Social Computing Systems Lab <div align="right">*Urbana, IL*</div>
- Working with Dr.Yun Huang to build AI-powered networking app for CSCW/CHI/UbiComp research conferences.
- Developing Selenium-based pipelines to scrape and structure data on 10,000+ researchers and papers.
- Integrating chatbot with PostgreSQL/Drizzle backend to support researcher profiling and collaborator matching.

Software Engineer <div align="right">Sept 2025 – Present</div>
Disruption Lab <div align="right">*Urbana, IL*</div>
- Building an Agentic AI workflow system to automate weekly curation of emerging AI research/news.
- Developing pipelines with Python, Beautiful Soup, and LangChain to scrape, synthesize, and deliver insights.
- Partnered with faculty client to refine requirements and deliver tools for knowledge retention and efficiency.

Lead Web Developer <div align="right">May 2025 – Aug 2025</div>
FiPet <div align="right">*Remote*</div>
- Led development of FiPet's web platform using Next.js, Vercel, and Tailwind CSS to deliver a fully responsive UI.
- Managed and guided a team of software engineers, overseeing code reviews and providing guidance.
- Collaborated closely with founders and design team to translate concepts into fully functional web features.
- Oversaw technical hiring processes and directed onboarding for multiple engineering interns.

Software Engineer <div align="right">Sept 2024 – Present</div>
The Illinois Space Society <div align="right">*Urbana, IL*</div>
- Developed data-processing tools to analyze rocket telemetry in real time, enabling faster performance diagnostics.
- Integrated Kalman filters for position and velocity estimation, improving accuracy of flight path reconstruction.
- Built software supporting the successful SpaceShot launch, breaking the UIUC record at 75,000 feet.
- Collaborated with avionics and propulsion teams to ensure reliable data pipelines and mission readiness.

PROJECTS

C.H.E.R | *Python, TensorFlow, OpenCV, React, Firebase*
- 1st place team at district-wide hackathon (Fremd Hacks) for creating an AI mental health tool.
- Developed an AI model trained on 35,000+ images of human emotion, ensuring reliable classification.
- Implemented real-time facial emotion detection using computer vision and deep learning.
- Built to monitor emotional patterns and detect signs of declining mental health to alert a trusted adult.

Autonomous Drone Controller | *Python, PyTorch, TensorFlow*
- Developed custom controller software to autonomously stabilize and navigate a quadrotor drone.
- Designed PID altitude and LQR attitude controllers, using Lyapunov stability to verify performance.
- Trained a neural network controller in simulation to optimize flight stability and control gains.
- Produced graphs and visualizations from simulation data to analyze control response and performance.

Webscrapers | *React, Firebase, Tailwind CSS*
- Founded a web development business, delivering customized websites with React and Firebase.
- Redesigned a local nonprofit's website, increasing traffic and improving attendance at community events.
- Developed proposals and pitched services to prospective clients, laying groundwork for continued expansion.

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, R, Swift, HTML/CSS, Assembly (MIPS), SQL
Frameworks/Libraries: React, Next.js, React Native, Node.js, TensorFlow, Tailwind UI, pandas, NumPy, OpenCV
Developer Tools: Git/GitHub, Docker, VS Code, Xcode, Vite, Firebase, Google Cloud, REST APIs