

Vedaant Jain

•Email: vvjain3@illinois.edu • Mobile: +1-447-902-2107

[in](https://www.linkedin.com/in/vedaant-jain/) [linkedin.com/in/vedaant-jain/](https://www.linkedin.com/in/vedaant-jain/)

[g](https://github.com/ethvedbitdesjan) github.com/ethvedbitdesjan

[v](https://vedaantjain.netlify.app/) vedaantjain.netlify.app/

EDUCATION

University of Illinois at Urbana Champaign

May 2026

Bachelor of Science: Computer Science & Mathematics, GPA: 3.98/4.00; Dean's List(2022-24)

PUBLICATIONS & PREPRINTS

Chaudhary I, Jain V, Singh G (2024). Decoding Intelligence: A Framework for Certifying Knowledge Comprehension in LLMs **SeT LLM@ICLR 2024**, arXiv: 2402.15929 [cs.AI].

Jain V, Alves Feitosa F, Kreiman G (2024). Is AI fun? HumorDB: a curated dataset and benchmark to investigate graphical humor.arXiv: 2406.13564.

SKILLS & COURSEWORK

Python, C/C++, TypeScript, SQL, NoSQL, Rust, JavaScript, Verilog, CUDA, LLVM, Git
PyTorch, JAX, AWS, CI/CD, Google Cloud, LLVM, MongoDB, MySQL, TCP, React, Docker, Pandas, NumPy, Next.js
Machine Learning(ML), Program Analysis, **Compiler Construction**, **Numerical Methods**, **Wireless Sensing**,
Algorithms, Data Structures, **Computer Architecture**, **Computer Vision**, Embedded Systems, NLP

WORK EXPERIENCE

Metaphor Data Inc., Software Engineering (ML) Intern

May 2024-Aug 2024

TypeScript, MongoDB, Jest, CI/CD, AWS, Terraform, GraphQL, Python, LLMs, VectorStores

- Developed CI/CD integrated comprehensive **testing framework** with **synthetic test-data generation** for **LLM and RAG pipelines, that found 2 bugs** boosting performance by **20%**.
- Pioneered **CLI tool** and 4 **API endpoints** for batch transactions across 5 data asset types, **increasing efficiency 10-fold**. Implemented automatic **GraphQL query generation** to accelerate development.

Disruption Lab-UIUC, Head of AI/ML ← Tech Lead ← SWE

Aug 2022 - May 2024

Python, PyTorch, Distributed Training, AWS, Serverless Architecture, Git, Streamlit, Unity, Google Cloud

- Led **10+ AI project teams** totaling 100+ students, achieving **91% client success rate**, including AMD. Projects spanned **LLM-guided web crawling, virtual classrooms, and malware detection**.
- Developed 5 **training modules** on LLMs, orchestration frameworks, and Computer Vision, for members with varying familiarity.

UIUC TheorieLearn, Software Developer

Jan 2024 - May 2024

JavaScript, HTML, CSS, Python, Git, CI/CD

- Full stack development** of **12 new resources** to aid learning in the **Algorithms class** at UIUC: <https://theorielearn.github.io/>.

RESEARCH EXPERIENCE

Ge Lab - UIUC, Generative Modelling Researcher

Sep 2024 - Present

Python, PyTorch, JAX, High Performance Computing, Generative Modeling, Reinforcement Learning

- Protein structure to sequence prediction using **Diffusion, Flow Matching, and Reinforcement Learning**.

Focal Lab - UIUC, Machine Learning Researcher

Aug 2023 - Present

Python, PyTorch, Data Structures, LLMs, Few-shot learning, Git, Natural Language Processing

- Novel framework for **certification of knowledge comprehension using Knowledge Graphs for Large Language Models**

Kreiman Lab - Harvard Medical School, Computer Vision Researcher

June 2023 - June 2024

PyTorch, Computer Vision, Distributed Training, Multimodal Models, DeepSpeed, NumPy, Pandas, SkLearn

- Created **novel dataset** for humor detection in **multimodal models**, conducting distributed model training and fine-tuning.
- Designed and deployed **AWS-backed surveys**, gathering **60k+ human data points** for analysis and clustering.

NCSA - UIUC, Computer Vision SPIN Intern

Aug 2023 - May 2024

PyTorch, High Performance Computing, Inverse Imaging Methods, Generative Modeling

- Presented research poster on **Diffusion Models and Inpainting** for Parkinson's disease facial feature simulation, achieving **6% improvement** in accuracy.

PROJECTS

- Developed **modular vision-language approach** for information extraction from academic resumes, enhancing structured data retrieval. <https://github.com/Forward-UIUC-2023S/vedaant-jain-sectioning-info-extraction>.
- Developed **AR app with Unity** using **CNNs** to identify and interact with **3D assets of surgical equipment** in real time on Android.
- Engineered **mobile-smart watch ECG** system using **ML and signal processing** for **real-time** emotion based music recommendations
- Built iOS app aggregating thrifting deals from various websites, utilizing **Firestore and AWS backend**, reducing shopping time by **20%**.
- Indoor **wireless localization** using **IMU, camera** data fusion, integrating step detection algorithms and RSSI with **Kalman filtering**