Vidit Gautam

vgautam2@illinois.edu | 616 East Green St, Apt 312, Champaign, IL | +1 (510) 598-9089 | LinkedIn | Github | viditgatutam.com

Education

University of Illinois – Urbana-Champaign | *Champaign – IL, USA* **Expected: May 2025**
B.S. in Biomedical Engineering + Computer Science Minor
Relevant Coursework: Data Structures + Algorithms, Intro to CS I+II, Linear Algebra, Statistical Analysis + Probability, Discrete Math
Current Coursework: Database Systems, Computational Math for Machine Learning and Imaging

Technical Skills

Languages: C++, Python, MATLAB, R, NoSQL
Frameworks/Tools: React, Node JS, TensorFlow, AWS, GCP, Docker, Hadoop, Apache Spark

Experience

OnePlus / Oppo | *PyTorch, scikit-learn, Python, CUDA* **June 2022 – Aug 2022**
Machine Learning Intern Seattle, WA

- Fine-tuned data pre-processing algorithms, employing optimization techniques to increase efficiency per data-point by 92%.
- Conducted literature review and wrote reports on upcoming Machine Learning research.
- Researched and improved state of the art shadow-removal model to improve authenticity of the output image.

University of Illinois – Urbana Champaign | *PyTorch, GPT-3, React* **June 2022 – Aug 2022**
Software Developer Intern Champaign, IL

- Created, trained, and fine-tuned a transformer-based language model using OpenAI GPT-3 to write and grade papers according to a given rubric. Our model graded unseen papers with a 93% accuracy.
- Pre-processed and standardized training data from various essay sources to enhance model performance.
- Developed an interactive frontend interface using React to visualize the results of the assessment and generation models.

Disruption Labs | *QisKit, Python, AWS* **January 2022 – May 2022**
Software Developer Champaign, IL

- Commissioned by **Ernst & Young,** to research and develop novel stock options pricing methods using Quantum Computing.
- Implemented options pricing models such as Black Scholes and Monte Carlo simulations for quantum computing using **Qiskit**. Researched the effectiveness of Quantum Generative Adversarial Networks (QGANs) for options pricing accuracy and developed a Quantum Finance API for future development.

NE Quest | *Swift, TensorFlow, OpenCV, Python* **March 2021 – Sept 2021**
Software Engineering Intern Stanford, CA

- Programmed a Machine Learning pipeline using TensorFlow and OpenCV to calculate the likelihood of diseases in observed patients. Cleaned and data collected through experimental testing on patients to be used for creating the model.
- Digitized an algorithm in Python normalized for the neurological Clock and Spiral test used by doctors to detect dementia in patients. My algorithm is currently deployed on the Swift made NE Quest app on the ios app store.
- Designed and programmed an app using Swift for intuitive interaction with the Clock and Spiral test.

Emory University – Pioneer Academics [Arxiv] | *TensorFlow, Google Cloud Platform* **August 2020 – September 2020**
Deep Learning Researcher Remote

- Create a Generative Adversarial Network that can produce images of cancerous tissue for further research on rare cancers.
- Researched the effectiveness of augmenting datasets of rare cancers using Generative Adversarial Networks for tumor detection.
- Designed and implemented a deep learning pipeline using TensorFlow on Google Cloud Services to produce microscale images of cancerous tissue for increasing size of Cancer Datasets. My model improved interpretation of rare cancer types by 73%.

Extracurriculars:

President of Association of Healthcare Technology Engineering:

- Organized and executed events, workshops and project showcases to engage and educate members on cutting-edge healthcare technologies and trends.
- Oversaw multiple projects simultaneously, ensuring deadlines are met, resources are allocated efficiently and deliverables meet or exceed expectations.
- Fostered a culture of collaboration and pushing the boundaries of innovation in UIUC and promoted engineering for healthcare applications amongst students.

Projects [Github]

MasterSheet: *React, Flask, OpenCV, GPT-4*

- Programmed a website as a hackathon project that summarize textbooks into a digestible series of notes or a cheat sheet.

Personal website: *Next JS, React, Tailwind CSS*

- Simulated of a command line interface as my personal website using Next.js and Tailwind CSS. Visit at viditgautam.com