George Ian Sornson

+1 (224)-300-3536 | iansornson55@gmail.com | LinkedIn

Education

University of Illinois Urbana-Champaign **Expected Graduation: May 2026**
M.S. Computer Science, The Grainger College of Engineering *Champaign, Illinois*

University of Illinois Urbana-Champaign **Expected Graduation: May 2025**
B.S. Computer Science, The Grainger College of Engineering *Champaign, Illinois*
Relevant Coursework: Data Structures, Database Systems, Systems Programming, Computer Architecture, Algorithms, Probability and Statistics, Linear Algebra, Networking, Machine Learning, Compilers

Experience

IMC Trading **Jun 2025 – Aug 2025**
Software Engineer Intern *Chicago, IL*

- Designed a **distributed system** for auto trader configurations using **modern Java** to reduce load on core infrastructure resulting in traders across multiple desks having **60x faster** access to pricing data
- Utilized **Apache Kafka** for real-time observability across distributed microservices to process over **1,000,000 messages** a day
- Built highly scalable systems using **Dagger** for **dependency injection** and **Mockito** for unit testing improving code modularity and maintainability

Capital One **Sep 2024 – Mar 2025**
Machine Learning Engineer Intern *Champaign, IL*

- Engineered a robust **ETL pipeline** using **AWS S3, PyTorch**, and **CLIP** to create tabular training datasets for a user-based content recommendation system
- Bench marked **clustering algorithms** and implemented a **neural network** with image embeddings, text, and customer metadata with **87% accuracy**
- Developed **multithreaded** and **multi-GPU Python workflows** to preprocess and clean data for model training resulting in over **93x faster** development and testing times

Gallagher **Jun 2024 – Aug 2024**
Software Engineer Intern *Rolling Meadows, IL*

- Trained and bench marked machine learning models with **scikit-learn** using **random forests** and **linear regression** for forecasting insurance claims data
- Automated the conversion process of over 1,200 DAX queries to be Snowflake compatible using Python **saving over 500 hours** of manual work

Projects

CUDA Optimized Convolutional Neural Network | *C, CUDA*

- Optimized the forward pass of a CNN to train 10,000 images down to 40ms from 120ms using CUDA
- Utilized streams, half2, tiled matrix multiplication, matrix unrolling, and shared and constant memory

Self-Driving Car in Grand Theft Auto V | *Python, TensorFlow, OpenCV*

- Trained a model using a convolutional neural network with TensorFlow for autonomous driving in Python
- Collected and manipulated over 100,000 in game images for training data with OpenCV

3D Ray Casting Engine | *C++, SDL2*

- Implemented a ray casting engine in C++ to render a two dimensional image as a three dimensional space
- Integrated the SDL2 graphics library to simulate movement, lighting, depth, and perspective

Technical Skills

Languages: Python, C++, C, Java, SQL, OCaml, JavaScript, Verilog, Typescript
Technologies: PyTorch, React.js, Next.js, OpenCV, AWS
Concepts: Software Engineering, Quantitative Finance, Machine Learning, NLP, Backend, Agile, Multithreading