www.linkedin.com/in/tonyh

Tony Allam

630-335-2107

tallam1@hawk.iit.edu

Education

Aug 2018 - Jun 2023

Illinois Institute of Technology, Chicago, IL - *MS in Data Science, BS in Computer Science*

- **Relevant Coursework**: Data Structures and Algorithms, Functional Programming, Databases, Data Mining, Programming Languages, Operating Systems, Probability and Statistics (In Progress)
- **Current GPA**: 4.0
- **Extracurriculars**: Delta Tau Delta - *Director of Academic Affairs*

Skills

- **Languages:** Python, SQL, Typescript, Javascript, HTML, CSS, Java, C, Haskell, Ocaml
- **Frameworks and Tools:** Angular, Flask, PostgreSQL, Scikit-Learn, PyTorch, Git, AWS, GCP, Azure, Snowflake
- **Certifications:** AWS Certified Cloud Practioner (expires Jan 2024)

Experience

Esri – *Software Engineering Intern (May 2021 – Aug 2021)*

- Worked with **gRPC** and **Kubernetes** to create pipelines for data into our **real time data** analytics service, improving the data transfer speed up to 5X as compared to our REST API
- Expanded features of a **Node.js** API to allow users to transform and query geospatial data from Snowflake
- Added comprehensive logging functionality to a Python service and **debugged** our ArcGIS Python API

Caterpillar – *Architecture and Analytics Intern (Jun 2020 – Feb 2021)*

- Used **AWS Lambda** and **SQS** to pipeline vast amounts of data between Snowflake, **S3**, and **DynamoDB**
- Reduced **latency** of a **Snowflake** integrations package by **50%** and increased readability by refactoring into smaller functions
- Worked directly under the principal digital architect to implement **anomaly detection** on real time data using **SageMaker** on thousands of custom trained models

ProvenAir – *Software Engineering Intern (Jun 2017 – Aug 2019)*

- **Reduced** a tedious data ingestion **workload** from **days to minutes** by integrating an **OCR** pipeline using ABBYY
- Greatly improved text recognition by **denoising** dirty scans with the **SciKit-Image** library
- Classified documents automatically with **NLP** and **XGBoost** achieving **90% accuracy** rate over wide range of inputs

Research/Projects

Autonomous Tractor – *EarthSense/DPI Research Scholars Program (Jan 2021 – May 2021)*

- Served as the **project manager** for a team developing a GPS and onboard sensor guided autonomous planting tractor
- Simulated our tractor and implemented a pure pursuit navigation algorithm using **ROS (Robot Operating System)** and Python

CUDA Code Optimization – *Research with professor, Ocaml (Aug 2021 - Present)*

- Working on a tool in Ocaml to automatically analyze CUDA code for potential **parallel** performance issues and determine which optimizations to apply

MaskOn– *Angular/Flask/PostgreSQL Web App (Mar 2020)*

- Developed an online marketplace for face masks using an **Angular** Ionic frontend and a **Flask** backend integrated with a PostgreSQL database

Accuroid – *Python App (Mar 2019)*

- Led a group in creating a prototype health application, which received **first place at the Accenture Chicago hackathon.**
- Provided a forecast of symptoms by categorizing users using **unsupervised clustering** algorithms

Volunteer

Code Nation, Chicago, IL – *Lead Instructor (Aug 2019 – Present)*

- Team-taught web development courses every year to low-income public high schoolers without access to a CS curriculum in Chicago

IMSA Intersession, Aurora, IL – *Instructor (Dec 2018)*

- Taught a week-long course on introductory data science principles, as well as Pandas, Numpy, and Scikit Learn