Andrew Michael Silveira DiBiasio

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Education

Georgia Institute of Technology, B.S. in Computer Science, 4.0 *August 2022 to May 2025*

- Concentration in Intelligence and Networks. Courses in AI, Probability & Statistics, DSA (TA), Linear Algebra, Multivariate Calculus, Discrete Math, and Programming & Optimization.

Technical Skills

Programming Languages: Java, Python, C, C#, JavaScript, Dart
Data Manipulation: Pandas, NumPy, SQL, Matplotlib, Seaborn, PIL
ML/AI: Scikit Learn, PyTorch, FAISS, LangChain LLMs
DevOps: AWS (Certified Cloud Practitioner), Docker, Git
Web/App Dev: Flask, REST APIs, HTML/CSS, React, JavaScript, Flutter, Unity, Android Studio

Experience

Software Engineer Intern – MITRE *May 2023 to August 2023*

- Assessed a PyTorch YOLO Computer Vision model's ability to detect and classify military threats. Implemented Non-Maximum Suppression based on IoU and confidence thresholds. Used vector similarity search to categorize hierarchical image labels. Reported findings to DoD CDAO.
- Debugged network and configuration issues within a containerized testing harness. Built and pushed docker images of the model onto Linux VMs for use with the harness and analytic scripts.
- Initialized and configured various AWS Services (EC2, S3, VPCs, IAM, NACL) to deploy highly available and secure websites in a sandbox environment. Earned an AWS CLF-C01 Certificate.
- Created an extractive AI Outlook bot using LangChain during an LLM focused GPT Hackathon.

Technical Aide Intern – MITRE *June 2022 to August 2022*

- Developed Augmented Reality features facilitating indoor navigation and integrated them into the MITRE@Work mobile app used by over 1,000 employees. Utilized Unity and Android Studio.
- Researched solutions to address development platform incompatibilities with the MapsIndoors API Client. Presented viable options geared towards interoperability to the development team.

Projects

AirWaves, a website monitoring TV reception in the Greater Boston Area *April 2020 to July 2020*

- Generates real-time graphs depicting relationships between various reception metrics and weather conditions. Created an API Framework that submits sanitized queries to the database.
- Established a data pipeline processing incoming signals: feeds signals from an antenna into a tuner, fetches signals from the tuner's API, and stores them in an SQL database.

CHIME, a COVID-19 patient projection model designed by Penn Medicine *April 2020 to April 2020*

- Open-Source Contributor making various pull requests resolving open issues. Contributions included the correction of various errors in the model and the implementation of new features.

Extracurriculars

Big Data Big Impact, Project Developer *January 2023 to Present*

- Researched and implemented various machine learning algorithms to achieve the best accuracy predicting flight statuses. Models included Random Forest, Decision Trees, and Neural Networks.
- Hosted the best model with a Flask API and deployed the predictor tool using React.

Data Science @ Georgia Tech, Member *August 2022 to Present*

- Used TensorFlow to train facial image classification models predicting age, gender, and ethnicity.
- Engaged in lectures on various machine learning algorithms and data analysis best practices.