

# ANDREW MICHAEL SILVEIRA DiBIASIO

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## Experience

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### Amazon

Seattle, WA

*Incoming Software Development Engineer Intern (ML)*

*May 2024 to August 2024*

- Summer 2024 Intern. Project to be determined.

### MITRE

Bedford, MA

*Software Engineer Intern (Part-Time)*

*January 2024 to Present*

- Development of an Augmented Reality Microscope utilizing Computer Vision models to identify malignant cancer cells. Showcasing an internal suite of model evaluation tools.

*Software Engineer Intern*

*May 2023 to August 2023*

- Assessed the ability of a PyTorch YOLO Computer Vision model to detect and classify military threats.
- Researched and established a workflow for computing metrics that more comprehensively evaluated the model than previous methods, ultimately leading to further hyper-parameter tuning. Presented findings to the US Dept of Defense.
- Expanded an existing AWS data pipeline, streamlining the T&E process and replacing manual data transfers.
- Debugged network and configuration issues with a containerized testing harness. Built and pushed docker images of the model onto Linux VMs for use with the harness and analytic scripts.
- Deployed websites in an AWS sandbox using EC2, S3, VPCs, IAM, & NACLs. Created an extractive AI Outlook bot using LangChain during an LLM focused Hackathon. Utilized Vector Similarity Search for image categorization.

*Software Engineer Intern*

*June 2022 to August 2022*

- Developed Augmented Reality features facilitating indoor navigation and integrated them into a mobile app used by 1K+ employees. Implemented solutions to platform incompatibilities with the API Client. Utilized Unity and Android Studio.

## Education

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**Georgia Institute of Technology**, *BS in Computer Science, 4.00/4.00 GPA*

Atlanta, GA

*Concentration in Intelligence and Information Networks*

*August 2022 to May 2025*

- **Selected Coursework:** Artificial Intelligence, Computer Systems & Networks, Programming & Optimization, Analysis of Algorithms, Principles of Software Engineering, Data Structures & Algorithms, OOP, and Mathematics (various)
- **Organizations:** Data Structures & Algorithms Teaching Assistants, Competitive Programming, Data Science @ GT, Big Data Big Impact, Investments Committee

**Westford Academy**, *High School Diploma, 4.36/4.00 GPA*

Westford, MA

*Demonstrated Interest in STEM Related Fields*

*August 2018 to June 2022*

- **Selected Coursework:** Calculus, Statistics, Computer Science, Physics, Chemistry, Biology, Psychology
- **Organizations:** Programming Club (President), Varsity Swim and Dive (Captain), NHS

## Skills

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**Languages**      Python, Java, C, JavaScript, HTML, CSS

**Technologies**    TensorFlow, PyTorch, OpenCV, LangChain LLMs, Docker, AWS, Git, SQL

**Skills**            Machine Learning, Data Analysis, Data Engineering, Full-Stack Development, Mobile Application Development, DevOps, Data Structures, Algorithms

## Projects

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**NLP for Financial Markets**, Capstone Project

*August 2023 to Present*

- Working under Prof. Shah to explore the use of sentiment analysis and numerical claim detection on earning call transcripts to predict financial markets, namely stock price changes by identifying business headwinds and tailwinds.

**AirWaves** | *Flask, REST APIs, SQL, HTML/CSS/JS, Plotly*

*April 2020 to July 2020*

- Created a website generating real-time graphs of local TV reception metrics & weather conditions, proving that my home solar panels disrupted my local TV reception. Designed an API framework submitting sanitized queries to the database.
- Established a pipeline processing incoming signals: feeds signals from an antenna into a tuner, fetches them from an API, & stores them in an SQL database. Operated 24/7 on home router and sent data to a remote web server via CRON job.

**Flight Delay Prediction** | *Scikit-Learn, Flask, ReactJS*

*January 2023 to December 2023*

- Implemented various ML algorithms to achieve the best accuracy predicting flight statuses, including Random Forests, Decision Trees, and Neural Networks. Hosted the best model with a Flask API and deployed the predictor via React.

**Facial Image Classification** | *TensorFlow, Seaborn, Matplotlib, Pandas, NumPy, PIL*      *October 2022 to December 2022*

- Trained facial image classification models using TensorFlow to predict age, gender, and ethnicity. Utilized Seaborn, Matplotlib, and Pandas for data exploration and NumPy and PIL for image processing. Achieved over 70% Accuracy.

**Interlude Connect** | *Flutter, Firebase, JavaScript*      *August 2020 to June 2021*

- Led a team of developers to create an iOS/Android app centered on music lesson scheduling, student-instructor matching and chatting, and volunteer hour tracking. Delivered the app to a nonprofit, which used it in 2 school districts.

**CHIME** | *Python, Flask, Plotly*      *August 2020 to May 2020*

- Open-Source Contributor for a COVID-19 patient projection model designed by Penn Medicine. Contributions included various PRs resolving open issues, the correction of various errors in the model, and the implementation of new features.