

Tyler DiPentima

Atlanta, GA • (954) 770-0483 • TDiPentima3@gatech.edu • www.linkedin.com/in/tyler-dipentima • US Citizen

EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science

Dual Specialization in Artificial Intelligence / Computational Perception and Robotics

Atlanta, Georgia

Expected August 2024

- GPA: 4.00
- **Relevant Coursework:** Deep Learning, Human-Computer Interaction, Artificial Intelligence Techniques

Bachelor of Science in Mechanical Engineering

Minor in Computer Science - Computing and Devices

December 2021

- GPA: 3.96
- **Relevant Coursework:** Machine Learning (using Python), Robotics, Robotics & Perception

EXPERIENCE

Alvaria, Inc.

R&D Software Engineer and Product Lead

Atlanta, Georgia (hybrid)

May 2022 – October 2023

- Decreased rate of bugs in the field by over 50% through HCI concepts, code robustness, and documentation
- Improved product efficiency and capabilities through R&D and third-party integration
- Interacted directly with multiple clients and internal teams to setup and live debug products in a collaborative environment
- Owned and maintained multiple SaaS database-centric products for Alvaria's cloud suite

The Haskell Company

Research & Development - Dysruptek

Atlanta, Georgia

May 2019 – May 2020

- Led early development of R&D portion of Haskell's Disruptive Tech branch
- Identified project bottlenecks through inter-team and client collaboration

PROJECTS

Machine Learning – Dog Breed Classification

- Batch-processed images from public database
- Implemented SVM, Random Forests, and Neural Network algorithms from scratch with hyperparameter tuning
- Created full report of results and compared algorithm performances by multiple metrics

CDC/Target Malaria Capstone – Georgia Tech InVenture Prize Semifinalist

- Collaborated with peers and company sponsors to conduct full design process for transgenic mosquito sorter
- Rapid prototyped and tested multiple design options considering sensor and FSM performance
- Created white papers and presentations to justify design decisions to faculty and industry sponsors

Robotics & Perception Series - Anki Cozmo

- Utilized various image processing tools such as filtering, feature extraction, and classification model training
- Implemented robot localization and adaptive path planning methods such as particle filters and RRT, respectively
- Tested and developed PID control for an automatic braking system that withstands disturbances

Image2Recipe Deep Learning Model

- Built from existing academic papers to replicate, pre-train, and improve upon state-of-the-art models
- Utilizing PyTorch and GCP for full development and testing cycle in a collaborative environment
- Leveraging transformers for joint text-image embeddings to produce recipe captions from food images

SKILLS

Programming: Python, PyTorch, SQL, R, MatLab, C/C++/C#, Scikit-learn, gRPC, OpenCV, Microcontrollers, PID control, FSMs

Tools/Frameworks: Docker, Git, AGILE, PostgreSQL, Google Collab, JIRA, BitBucket, Anaconda, Linux, Unit Testing, Kubernetes

AI specifics: Neural Networks, Deep Learning, KBAI, Model and Data Visualization, Data Augmentation, LLMs, NLP

Mechanical: SolidWorks, AutoCad Inventor, 3-D Printing, Rapid Prototyping, Laser Cutting, Fabrication, Soldering

Interests: Reading (Not limited to academic papers), Basketball, Baseball, Traveling, Cooking