Ryan Kopec
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Education

Georgia Institute of Technology — Expected Graduation: April 2021
Masters of Science, Computer Science
Specialization: Machine Learning/Perception & Robotics

Drexel University — Graduated Cum Laude: June 2016
Bachelor of Science, Mechanical Engineering
Minor: Electrical Engineering

Experience

Senior Algorithm Developer, CVision AI, Remote. January 2020 – April 2020

- Improved Deep Learning Computer Vision algorithms in Keras/Tensorflow and developed analysis tools and scripts to view performance of algorithms.
- Trained Resnet and Retinanet architectures to detect and classify different marine species in videos.
- Developed tests in Jest and improved front-end written in Javascript, CSS and HTML.
- Maintained software using Python, Javascript, Docker and Kubernetes.

Graduate Teaching Assistant, Georgia Institute of Technology, Atlanta, GA. September 2018 – December 2019

- Knowledge-Based Artificial Intelligence

Software Engineer, Slyce, Philadelphia, PA. April 2019 – August 2019

- Developed visual search applications using Python, Javascript, Angular, HTML, CSS MongoDB, PostgreSQL, Docker, TensorFlow, Keras, and Kubernetes.
- Built tools to analyze and increase the accuracy of developed machine learning and computer vision algorithms.
- Utilized Git and GitHub to update and track code.
- Maintained and updated web applications on Google Cloud Platform.

Software Engineer, Lockheed Martin, Moorestown, NJ. March 2015 – April 2019

- Debugged and developed software in C++ to improve the currently implemented system.
- Developed tools for analysis using Python, Pandas, NumPy, and MATLAB.
- Wrote Python, Pandas, and NumPy code to quickly process data received from the models and displayed in charts and graphs on a PowerPoint or PDF.
- Collaborated with cross-functional engineering teams to execute new filters and algorithms with C++, Git, and Jenkins to improve the system's performance.

Scrum Master, Lockheed Martin, Moorestown, NJ. August 2016 - 2017

- Managed JIRA, conflicts, and backlog for a team of eight engineers.
- Held sprint planning meetings, retrospectives, and daily scrums.
- Worked closely with product owner and business development leads.
- Reinforced and educated team on scrum and agile methods to improve planning.

Projects

Stabilization of Quad-Copter with Broken Rotor Project

- Worked on a team of five to create a control system to stabilize damaged quad-copter.
- Simulated flight of damaged quad-copter and tested control systems in MATLAB.
- Programmed a user-friendly GUI in python to control quad-copter.
- Implemented the design of the control system into the quad-copter using C++ programming.

Behavioral Cloning for Autonomous Vehicle

- Used Udacity's autonomous driving simulation to collect data and run autonomous vehicle.
- Utilized feature engineering, data augmentation, and data pre-processing techniques to prepare images and data from three cameras on the windshield of the vehicle for training.
- Developed a CNN model based on Nvidia's self-driving model using Keras and TensorFlow.
- Ran the convolutional neural network through the simulation where an autonomous car drove around a track.

Skills

Computer: C++, C, Python, Java, CSS, HTML, SQL, Unreal Engine, Javascript, Git, GitHub, Android SDK, Unix, Linux, Windows, MacOS X, Bootstrap, jQuery, Go, Node JS, React.js, Django, Flask, TensorFlow, Caffe, Keras, OpenCV, PyTorch, Pandas, NumPy, scikit-learn, Jenkins, GCP (Google Cloud Platform), AWS, Docker, Kubernetes, ROS, Jest