Joseph Leavitt

407-635-7186
JoeLeav1@gmail.com
https://github.com/JoeLeavitt

Work Experience

L3 Harris Technologies — Software Engineer — July 2018 - Present

- Created a python tool to automate maritime ship data extraction, saving 2 - 5 days of manual work per week.
- Utilized in-house deep learning tools and TensorFlow's Object Detection API to train models for detecting ships and types of ships in satellite imagery. (Python and NumPy)
- Augmented region proposals to cover the range of object sizes in a remote sensing data set by adding additional anchors and increasing the set of aspect ratios between the width and height of each anchor. This change increased accurate predictions in an image with 213 ships by 67.79%, resulting in a total accuracy of 97.18%.
- Implemented and trained several linear regression models and a random forest regression model for an internal tool that ranks candidates based on a photo of their resume. (Python, Scikit-learn, and Pandas).
- Proposed a state of the art object detection and tracking project to innovation leaders at Harris. Received $45,000 in funding.

SavvySuit — Software Engineer Intern — May 2016 - November 2016

- Implemented a search and search filtering feature to check for conflicts of interest in a database of attorney clients using JavaScript, Polymer, and Node.js.

Lockheed Martin — Software Developer Intern — August 2015 - May 2016

- Developed software in C and C++ for a classified military missile program. Focused on bug fixes and code refactoring.

Projects

Knest — Team of 4 — September 2017 - May 2018

- **Won 1st in Discipline (Computer Science)** at Florida's State-Wide Senior Design Showcase 2018.
- Knest is a desktop application that uses deep learning and image processing techniques to detect birds in large sets photos and enhance them. (Python, TFLearn, TensorFlow's Object Detection API, NumPy, and OpenCV).
- I was responsible for implementing, training, and fine-tuning the object detection model for bird detection.

Collaboard — Team of 2 — January 2016

- **Won 1st place** overall at PolyHacks Hackathon. Collaboard is a web application that consists of a interactive whiteboard and chat. (JavaScript, Socket.IO, and Node.js with Express.js)

Class-ify — Individual project — November 2015

- **Won the education award** at KnightHacks Hackathon. Class-ify is a lightweight Chrome Extension that injects Rate My Professor ratings into the UCF's class search page. (JavaScript)

Skills

Languages: Python, JavaScript, HTML, CSS, Java
Frameworks and Libraries: TensorFlow, TensorFlow Object Detection API, TFLearn, NumPy, Scikit-learn, Pandas, Node.js
Tools: AWS, Git, Jupyter, Vim, Cron, Bash, Terminal, Linux, macOS, Windows, WinSCP
Deep Learning/Machine Learning: Object Detection, Object Classification, Regression.

- Proficient with deep convolutional architectures such as Resnet and Inception.
- Proficient with object detection pipelines such as Faster RCNN and YOLOv3.
- Experienced in model fine-tuning and optimization.

Education

University of Central Florida — 2014 - 2018
Bachelor of Science in Computer Science — GPA: 3.2/4.0