Se Un Kim

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Education

California State University, Long Beach **August 2014 – December 2018**
Bachelor of Science in Computer Science

- GPA : 3.655/4.000
- Strong Computer Languages: Java, Python, XML, NoSQL, HTML, CSS, Git, Bash
- Intermediate Computer Languages: C#, C++, SQL, Javascript
- Environment Experience: Keras, AWS, Google Cloud, Node.js, Android Studio, Xamarin, Linux, Github, Mongo

Experience

Lead Network Embedded Systems Research Assistant **May 2018 - Ongoing**
California State University, Long Beach

- Implement advanced machine learning paradigms for pattern and anomaly recognition for intrusion detection on satellite systems.
- Achieved an anomaly detection rate of 99.6% on test data using a custom Minimum Scoring Graph algorithm.
- Wrote an in depth research paper on the methodology used to detect anomalies within the streaming data logs of an MIL-STD-1553 multiplex bus system.

Machine Intelligence and Information Processing Systems **February 2018 - Ongoing**
California State University, Long Beach

- Participate and receive critical guidance under Dr. Wenlu Zhang with the objective of increasing my Machine Learning skills and knowledge.

Projects

Object Detection and Classification of Ships in Satellite Images
https://github.com/PenguinDan/DeepLearningShipDetection

- Use Keras, OpenCV, and various Python APIs to correctly detect and classify ships in large satellite images using a Convolutional Neural Network in conjunction with a custom object detection algorithm.
- In comparison to the top approach in Kaggle.com that utilizes a sliding window across the entire image to inaccurately detect ships within 15 minutes, our project pipeline is able to accurately detect and output bounding boxes in less than 5 seconds.

Senior Project: Astral Framework and Phylo Proof of Concept Android Application
https://github.com/Doliveraa/RedPony

- Create an open source framework that allows developers to quickly and efficiently create file-sharing applications with strict location, temporal, and authorization restrictions using Node.js, Mongo, and an AWS Linux environment.
- Create a proof of concept Android application that utilizes the Astral Framework's API to create user and location restricted "rooms" where users can drop files with strict temporal restrictions using Java, XML, and Android Studio.
- Utilize cryptographically strong user authentication methods such as SRP, SSL communication, and safe storing methods with bcrypt.

Ransomware Application
https://github.com/DanDan-AdamFlores/Ransomware

- Create a recursive cryptographically strong file encryption program built with Python and utilizing concepts such as RSA, HMAC, and AES-CBC that communicates with a live Node.js server implementing SSL and a RESTful API.

Awards

Member of Tau Beta Pi Honor Society
California State University, Long Beach

- Eligible to become a member by ranking in the top eighth of the engineering junior class.

4x President's Honor List
California State University, Long Beach

- Completed a total of 58 units with an average GPA of 3.95 within 4 consecutive semesters.

References

Dr.Mohammad Mozumdar: mohammad.mozumdar@csulb.edu
Dr.Wenlu Zhang: wenlu.zhang@csulb.edu