Ryan C. Kirkpatrick

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OBJECTIVE

Gain industry experience and learn what it would take to create something that could have a direct and positive impact on people's daily lives.

SKILLS

- Strong collaborator, communicator, and logical thinker
- Exceptionally skilled at Python and ML packages such as scikit-learn and TensorFlow
- Git, MATLAB, Verilog, and SQL experience
- Coursework in networking, distributed systems, cryptography, robotics and VLSI design

PROFESSIONAL EXPERIENCE

UCSB
Teaching Assistant *09/2019-present*
- Designed, led, and graded labs in Android app development, embedded C and ML in Python
- Helped answer questions, debug via pair programming, and gave code design feedback
- Voted Best TA 2019-20 by students for the ECE Department

Advantest America, Inc., San Jose, CA
Programming Internship *07/2019-09/2019*
- Recruited by Prof. Wang to work as liaison and build rapport between Advantest and UCSB
- Tasked to improve defect detection on images of manufacturing parts
- Overcame ambiguity and mislabeling of dataset using less than 100 defective images by utilizing novel preprocessing steps to decrease learning space
- Used AWS S3 and EC2 instances to store image data and train machine learning algorithms

IEA Research Group, UCSB, under supervision of Prof. Wang
Team Lead / Programming Internship *09/2018-06/2019*
- Led senior project related to the research of Prof. Wang: https://ieacapstone.wordpress.com
- Developed novel NLP strategy for interpreting user queries and managed project codebase
- Unofficial demo video: https://www.youtube.com/watch?v=XMk__Djtibg

Toyon Research Corporation, Goleta, CA
Research Intern *07/2018-09/2018*
- Pretrained and modified architecture of Faster R-CNN and YOLOv3 for object detection
- Implemented novel preprocessing step of incorporating proprietary background subtraction to increase prediction accuracy

Research Intern *07/2017-09/2017*
- Researched activity recognition in videos
- Wrote MATLAB scripts for STIPs, 3D-HOG, k-means clustering, PCA, and decision trees
- Experimented with VGG-16 and LSTM neural networks to gauge performance differences

EDUCATION

University of California, Santa Barbara:
Bachelor of Science, Computer Engineering, June 2019, GPA: 3.93
Master of Science, Computer Engineering, Expected June 2020, GPA: 3.86