



Experience

ARRICOR, MACHINE LEARNING ENGINEER – 2019 - PRESENT

Arriver is a well established machine learning consulting company based in Washington. I work here part time developing advanced NLP tools for prototyped projects. I've developed a topic extraction pipeline and a specialized text summarization API using GPT-3.

CUREMETRIX , MACHINE LEARNING RESEARCHER – AUGUST 2020 - PRESENT

Developed and implemented several next generation data augmentation techniques to improve performance of image classification and detection systems on small medical image datasets. Corpus augmentation techniques improved classification by up to 16% depending on application.

HULU, SOFTWARE DEVELOPMENT INTERN – SUMMER 2020

Developed a web application security lab in conjunction with the cyber security and cloud engineering teams. Used lab to programmatically deploy vulnerable web applications to GKE and then attack the applications while monitoring behavior. Later deployed RASP protections over the web applications and measured how much protection each RASP provided. Recommended RASP vendor to senior leadership.

BIDS, RESEARCH LEAD – 2019 - 2020

Led a team of 5 undergraduates on a semester long project to explore corpus augmentation techniques based on generative models. Our goal was to improve computer vision performance on medical data sets which are notoriously undersized. We were able to use our novel techniques to improve the accuracy of a classification task by 12.4%.

Education

UC BERKELEY, DATA SCIENCE B.A – MAY 2021

Minor in BioEngineering. Clubs and activities: ML@B officer, project leader and author, Data Science Discovery program team leader, Human.Capital member, computer and data science tutor.

LONDON SCHOOL OF ECONOMICS, CERTIFICATE IN MACHINE LEARNING – 2019

Highest grade in program.

Skills

Machine learning, computer vision, NLP, image processing, research, data science, data processing, tensorflow, pytorch, pandas, numpy, openCV, python, C++, cloud computing, flask, computer security, penetration testing, project management, git , google cloud, docker , translating highly technical concepts to a non-technical audience, communication, problem solving, problem reduction

GIAC Cyber security (401: security essentials) Certification - in progress

Google cloud Engineer certificate - in progress

Projects

FOUNDER, SOIS.US

Built a web platform for international students to exchange classes with domestic students in order to help them comply with ICE immigration orders and allowing them to stay in the U.S. Web platform scaled to 50,000 unique users in the first month and story was picked up by several major news organizations including LA Times, Wall Street Journal, etc.

ADVERSARY RESISTANT COMPUTER VISION

Worked with two others to develop a computer vision system based on squeezeNet that is more resistant to certain classes of natural adversarial examples. Our unique architecture and preprocessing improved accuracy on our selected adversarial class by 11%.