Johnathan Xie

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EXPERIENCE

Cruise LLC **San Francisco, CA**
Machine Learning Intern *September 2024–September 2022*

- Developed scalable pose extraction pipeline to generate 2D and 3D pose values on self-driving car videos to generate curated training datasets of with millions of images
- Researched human motion understanding methods to improve traffic controller gesture recognition and pedestrian falling detection by over 20% compared to state-of-the-art production models

FORTINET, INC **Sunnyvale, CA**
Research and Development Intern *May 2022–September 2022*

- Developed system using LightGBM to detect anomalous behavior in Fortinet DNS servers using self-supervised training over 10 million data points.
- Deployed ticket routing algorithm via internal RESTful API now used to route all Fortinet customer service tickets, approximately 700 daily, for teams around the world.

DAWNLIGHT **Palo Alto, CA**
AI Research Intern *July 2020–September 2020*

- Trained privacy preserving COVID-19 detection algorithm through applying state-of-the-art Detectron2 models to thermal video dataset to monitor forehead temperatures within ± 1% error.
- Developed keypoint relational algorithm to monitor patient locations in 3D space relative to room objects using semantic segmentation model trained on ADE20K, person keypoint detection, and chamfer distance calculations to reach ± 0.1m error with only RGB vision.

SENTIEON, INC **San Jose, CA**
Data Science Intern *May 2020–July 2020*

- Competed for Sentieon in PrecisionFDA COVID risk prediction for VHA patients challenge against graduate students.
- Processed unstructured medical record data to form structured tabular columns for training XGBoost model.
- Awarded bronze medal in deceased predictions and silver medal for days hospitalized predictions.

HIGHLIGHTED RESEARCH

Calibrating Language Models with Adaptive Temperature Scaling
EMNLP 2024

Self-Guided Masked Autoencoders for Domain-Agnostic Self-Supervised Learning
ICLR 2024

Zero-shot Object Detection Through Vision-Language Embedding Alignment
ICDM FOMO-VL Workshop (Spotlight Oral Presentation)

EDUCATION

STANFORD UNIVERSITY **Stanford, CA**
Computer Science Major *Expected Graduation 2025*
GPA: 4.04/4.0

SACRED HEART PREPARATORY **Atherton, CA**
High School Diploma *May 2022*
GPA: 4.0/4.0

SKILLS

Computer Vision, Natural Language Processing, Pytorch, Research, LaTeX, Python, C++, Algorithmic Design/Complexity Analysis

HONORS

15,000 GCP Grant, 20,000 Azure Grant, USA Computing Olympiad Gold Division, 1st World Ranking in FTC Robotics, 2x AP Scholar with Distinction