John **Dang**

Computer Science Student · AI / ML Researcher · Software Engineer

(+1) 669-294-3916 | jamqd@ucla.edu | www.johndang.me | jamqd | johnamqdang

Education

University of California, Los Angeles (UCLA) *Los Angeles, CA*

M.S. and B.S. in Computer Science, GPA: 3.7 *Sep. 2018 - Jun. 2023*

- Achievement Scholarship Recipient, Association for Computing Machinery (President of AI), Upsilon Pi Epsilon (CS Honor Society)
- Relevant UCLA Coursework: Reinforcement Learning (Graduate), Natural Language Processing (Graduate), Neural Networks and Deep Learning, Probabilistic Decision Making and Reinforcement Learning, Machine Learning, Computer Vision, Data Mining, Artificial Intelligence

Experience

Center for Vision, Cognition, Learning, and Autonomy at UCLA / Center for AI and Robot Autonomy *Los Angeles, CA*

Machine Learning Researcher; Advisor: Professor of CS and Statistics, Song-Chun Zhu *May. 2019 - Present*

- Researching unsupervised scene decomposition, representation learning, and ML/robotics in VR under Prof. Song-Chun Zhu.
- Built VRGym, an AI research platform for training and evaluating agents in 3D environments built on on **(Unreal Engine/C++/Python).**
- Designed and implemented automatic structured, stochastic 3D scene generation including integration with Shapenet and Partnet. Wrote scripts for automated import and conversion of raw 3D model files into Unreal Engine assets.
- Demonstration of work was presented by Professor Song-Chun Zhu during an invited talk at **World AI Conference 2019** in Shanghai.

Amazon Web Services (AWS) *Seattle, WA*

Software Development Engineer Intern *Jun. 2021 - Sep. 2021*

- Elastic Compute Cloud (EC2) Networking Org. Deployed load testing framework for detecting anomalies in performance regressions when new code changes are pushed to Centurion, a service that manages all security configurations for EC2 instances.
- Built ticket automation library for automatically posting data visualizations in ticket correspondence for operator view and resolving automatically resolvable tickets.

UCLA Vision Lab *Los Angeles, CA*

Machine Learning Researcher; Advisor: Professor of Computer Science, Stefano Soatto *Mar. 2020 - Aug 2020*

- Multi-task learning in computer vision through deep learning project. Implemented baseline algorithms from computer vision research papers.
- Designed, tuned, and trained novel deep learning models for performing multiple computer vision tasks including pose, optical flow, and depth prediction using a single model **(Python/Pytorch)** on KITTI and VKITTI autonomous driving datasets.

Amazon Web Services (AWS) *Seattle, WA*

Software Development Engineer Intern *Jun. 2020 - Sep. 2020*

- Elastic Compute Cloud (EC2) Networking Org. Collaborated with engineers to design and implement internal facing production operator tool.
- Implemented infrastructure for logging of serialized EC2 host security configuration state change data structures to AWS Cloudwatch **(Java)**.
- Built command-line interface for querying historical security configuration state data from AWS CloudWatch, deserializing this data, and programmatically reproducing host state at any time in the past for complex analysis of host behavior on a local machine **(Java)**.

Kona *Los Angeles, CA*

Deep Learning Engineer *Oct. 2018 - Oct. 2019*

- Created deep learning model for five-factor OCEAN personality trait extraction from text for enabling client companies' to better understand employees. Model predicted 0.0-1.0 valued personality traits **within 0.015**. Utilized state of the art NLP algorithms **(Python/Tensorflow)**.
- Designed and implemented data infrastructure, including storage on **AWS** Simple Storage Service and Relational Database Service **(MySQL)**.
- Ran multi-GPU distributed **Tensorflow** model training on AWS Elastic Compute Cloud, and model deployment on AWS Elastic Beanstalk.

Howard Hughes Medical Institute (HHMI) / Ozcan Research Group (ORG) *Los Angeles, CA*

Machine Learning Researcher; Advisor: Professor of Electrical Engineering, Aydogan Ozcan *Oct. 2018 - Jun. 2019*

- Developed deep learning system for quick, mobile, and accurate protein analysis of blood sample images for disease diagnosis in **Tensorflow**.
- Custom Convolutional Neural Network system achieved **tenfold improvement** over traditional methods in efficiency on embedded devices.
- Presented work, *Fast Particle Analysis Using Machine Learning*, at HHMI Day Research Conference. Poster here: www.johndang.me/ozcan

Skills

Programming Python, C++, C, Java, Javascript, Matlab, HTML, CSS, Bash, Octave, Swift, SQL

Technologies Pytorch, Tensorflow, Git, Keras, SKLearn, OpenAI Gym, AWS, ROS, Unreal Engine, LaTeX