# John **Dang**

Computer Science Student · Software Engineer · AI / ML Researcher

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## Education

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

B.S. in Computer Science, GPA: 3.8, Junior Standing — *Sep. 2018 - Jun. 2022*

- Achievement Scholarship Recipient, Association for Computing Machinery (AI Projects Officer), Upsilon Pi Epsilon (CS Honor Society)
- Relevant UCLA Coursework: Machine Learning, Computer Vision, Data Mining, Algorithms and Complexity, Data Structures and Algorithms, Object-Oriented Programming, Software Construction, Probability Theory, Linear Algebra, Multivariate Calculus, Discrete Structures, Statistical Reasoning, Research, Computer Organization
- Independent Coursework: Stanford Machine Learning (Coursera), Deep Learning (deeplearning.ai), Deep Reinforcement Learning (Berkeley)

## Work Experience

**Center for Vision Cognition Learning and Autonomy (VCLA) /
International Center for AI and Robot Autonomy Inc. (CARA)** — *Los Angeles, CA*

Undergraduate Student Researcher; Principal Investigator: Professor of CS and Statistics, Song-Chun Zhu — *May. 2019 - Present*

- Researching transfer learning, reinforcement learning, and causal learning jointly at VCLA lab and CARA non-profit under Prof. Song-Chun Zhu.
- Developing VRGym, an AI research platform for training and evaluating agents in 3D environments built on on Unreal Engine (C++ and Python).
- Desgined 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. VRGym platform will be open-sourced soon.
- Integrating Pyro, a Pytorch-based probabilistic programming language for probabilistic inference in stochastic VRGym environments.
- Demonstration of work was presented by Professor Song-Chun Zhu during part of an invited talk at World AI Conference 2019 in Shanghai.

**Sike AI (Kleiner Perkins, StartupUCLA, Anderson Venture Accelerator Backed)** — *Los Angeles, CA*

Deep Learning Engineer — *Oct. 2018 - Present*

- Created deep learning model for accurate five-factor OCEAN personality trait extraction from text for enabling client companies' management to better understand employees. Utilized state of the art natural language processing algorithms. Clients: Heal, Witsmo, Saffron and more.
- 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; Principal Investigator: 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 at Howard Hughes Medical Institute Day Undergraduate Research Conference. Poster here: www.johndang.me/ozcan

**Logos News LLC.** — *Los Angeles, CA*

Software Engineering Intern — *Oct. 2018 - Dec. 2018*

- Developed iOS app in for diverse, crowd-sourced news platfrom (Swift). Performed various app and database bug fixes and refractoring.
- Implemented article text highlighting feature enabling text-specific social interaction, discussion, and bias ratings.
- Redesigned Firebase database structure and wrote new Google Cloud Functions, lowering data processing and app loading times (Javascript).

## Projects

**Sincerely, AI**

Developer (SB Hacks 2019)

- Trained Tensorflow deep learning model for detection of insincere questions using transfer learning. Achieved 96% accuracy and 0.7 F1-score on Quora Insincere Questions Dataset (over 1.3 Million data samples). Utilized transfer learning and model hyperparameter fine-tuning.
- Deployed model on Python Django web server for use with Chrome Extension that determines sincerity of highlighted text on webpage.

**Perspective**

Developer (Winner of Most Useful Hack at EV Hacks 2018)

- Developed Java web app that allows user to read two news articles side by side that are likely to differ in perspective on the user's search query.
- Integrated Bing News Search API for article retrieval and scraped web for bias data for determining likelihood of articles differing in perspective.

## Skills

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

**Technologies**    Git, Github, Tensorflow, Pytorch, Keras, SKLearn, OpenAI Gym, Amazon Web Services, Firebase, Unreal Engine, LaTeX