

# FELIX ZHANG

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## Education

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### University of California, Los Angeles (UCLA)

mGPA: **3.9** | uGPA: **3.8**

**Master of Science in Computer Science** (Exceptional Student Admission Program)

2021-2023 (Graduation: March)

**Bachelor of Science in Computer Science** (Early Graduation to pursue accelerated MS/BS)

2018-2021

*Coursework:* *Deep Learning in Computer Vision, Computer Vision, Fairness in NLP, AI and Climate Change, Reinforcement Learning, Adversarial Robustness, Data Mining, Deformable Models, ML-Driven Video Analytics, Natural Language Processing, Medical Imaging, ML in Genetics, Intro to ML*  
*Involvement:* *Sigma Eta Pi, Entrepreneurship Fraternity (Director of Marketing); Daily Bruin (Online Intern); Creative Labs (Backend); DevX (Backend)*

## Work Experience

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### Facebook

Spring 2022

Software Engineering Intern—AI/ML

- Improving Multimodal Retrieval using Facial Emotion detection and Audio Event Detection models
- Experiment and perform ablations for various models to surpass production model baseline
- Experimented with implementing OSCAR pretraining to improve language grounding for audio text tokens

### Verkada

Summer 2022

Software Engineering Intern—Computer Vision

- Development of models from baselines to prod by experimenting with architectures, pretraining, imbalanced dataset measures
- Improved Pedestrian Attribute, Vehicle Attribute and Make Models deployed in production to 90% Attribute Precision/Recall
- SimCLR pretraining to improve pedestrian attributes using motion-tracked pairs of pedestrians

### Honey (PayPal)

Summer 2019

Software Engineering Intern

- Saved users 30k+/month by reverse engineering unsupported domains to add functionality for the Honey Extension.
- Added affiliate tagging to generate revenue on seven travel sites for Firefox by integrating JavaScript between extension and website
- Used NodeJS to interact with website databases to create Honey coupon path and checkpoints to help users save money

## Research Experience

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### PLUS Lab at UCLA

Fall 2022-Current

Research Intern at Peng's Language, Understanding, and Synthesis Lab | Supervised by [Professor Violet Peng](#) for Thesis

- Guided Generation of Language Models that preserve pretraining while improving commonsensicality and lexical constraints
- Exploring guidance using External Knowledge Graphs (ConceptNet) to generate more coherent results for lexical constrained tasks

### Center for Vision Cognition, Learning, & Autonomy

Fall 2021- Fall 2022

Research Intern at Intuitive Physics Group (VRGym) | Mentored by Song-chun Zhu, Xie Xu, [Mark Edmonds](#)

- Conditioned Scene Understanding on novel video dataset of ShapeNet objects in scenes simulated in Unreal 4.
- Ran baseline experiments with Slot-Attention Network and explored Language and Scene Graph priors on novel dataset

### Bruins in Genomics Research Program at UCLA

Summer 2020

Research Intern at Zaitlen Lab | Research Excellence Award

- Researched to understand how Polygenic Scores (PRS) vary between quantiles in genotypes of the UK BioBank Data
- Ran simulations using Python/R to demonstrate power of quantitative regression and meta-regression methodology on PRS
- Presented findings of power and false positive rate on GxE, GxG, and additive models to research symposium of UCLA faculty

## Awards/Technical Skills

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- Cal Hacks Fellowship, National Merit Semifinalist, National AP Scholar
- Python, C++; PyTorch, Torch Lightning, HuggingFace, AWS, PSQL, Git
- NLP (BERT, GPT, Transformers, LSTM...), Computer Vision (YOLOv3, GANs, U-Net...), ML (SVM, Random Forest, KNN...)

## Projects

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- See [fzbuzz.github.io/projects/main](https://fzbuzz.github.io/projects/main)