

Loren Jiang

☎ (949) 769-0678

| ✉ loren.jiang@gmail.com

| 🏠 lorenjiang.com

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Education

University of California, Berkeley

Berkeley, CA

BS BIOENGINEERING, MINOR: ELECTRICAL ENGINEERING & COMPUTER SCIENCES

Aug 2014 - May 2018

GPA: 3.61

Skills

Backend Django • Django REST Framework • PostgreSQL • Python (pandas, NumPy, SciPy, PyTorch)

Frontend React • Redux • JavaScript • HTML/(S)CSS

Other Git • AWS (S3, EC2) • WebPack • Docker

Experience

UCSF Macromolecular Structure Group

San Francisco, CA

STAFF RESEARCH ASSOCIATE

Sep 2018 - Dec 2019

- Developed software to streamline research and administrative workflow for the X-Ray Crystallography facility
 - hitsDB, a full stack Django web app to streamline data collection; image classifier for protein crystallization detection; lab billing system using Python scripts to aggregate usage data from Google forms
- Maintained and trained users on robotic equipment and related software to reduce user error and equipment downtime (protein crystallization imagers, high-throughput liquid handlers)

Biomimetic Millisystems Lab

Berkeley, CA

ROBOTICS UNDERGRADUATE RESEARCHER

Jun 2017 - Sep 2018

- Designed and characterized novel electrostatic actuator technology for miniaturized applications (2-DoF micro-mirror, milli-scale robot) under guidance of Ethan Schaler Ph.D. leading to two second-authored publications
- Applied actuator technology to develop miniaturized cell shaker for summer research fellowship at UC Berkeley

Projects

hitsDB

Django, PostgreSQL, jQuery, S3

APP TO STREAMLINE DATA COLLECTION FOR UCSF RESEARCH PIPELINE

hitsdb-demo.herokuapp.com

- Designed database schema to best represent the experimental data that would be collected and wrote custom queries and transactions using Django ORM to optimize SQL performance
- Tested views and models using Python packages Factory Boy and Faker, as well as Coverage to gauge test effectiveness

xtal-classifier

Python, Docker, FastAi

PROTEIN CRYSTAL IMAGE CLASSIFIER USING RESNET34 DEEP LEARNING

xtal-classifier.onrender.com

- Trained and deployed as web app a model with an accuracy of 85% using ResNet34 CNN

fpl-compare

React/Redux, Material-UI, React-vis

STATS COMPARISON APP FOR FANTASY PREMIER LEAGUE (FPL)

fpl-compare.herokuapp.com

- Webscraped external football websites using Selenium and used API provided by FPL to provide rich, custom datasets
- Used Uber's react-vis charting library to visualize underlying data trends

MisoBoop.com

Django, PostgreSQL, DigitalOcean

SHOWCASE WEBSITE THAT FEATURES PERSONAL RECIPES AND CAT

github.com/loren-jiang/misoboop

- Built using Django + PostgreSQL backend and jQuery/Javascript + Materialize CSS, hosted on Digital Ocean

Featured

PUBLICATIONS

- Schaler, E. W., Jiang L., & Fearing, R. S. (2018) Multi-Layer, Thin-Film Repulsive-Force Electrostatic Actuators for a 2-DoF Micro-Mirror. *Actuator 2018, Bremen, Germany*.
- Schaler, E. W., Jiang L., Lee C., & Fearing, R. S. (2018) Bidirectional, Thin-Film Repulsive-/Attractive-Force Electrostatic Actuators for a Crawling Micro-Robot. *MARSS 2018, Nagoya, Japan*.