Jessica Chen

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EDUCATION

University of California, Los Angeles **June 2022**
B.S. Computational and Systems Biology (Biological Data Sciences Concentration) GPA: 3.92/4.0
M.S. Bioinformatics (5-year Departmental Scholars Program, graduating Spring 2022)

Relevant coursework: Machine Learning Applications in Genetics, Biomedical Knowledge Representation, Medical Information Technologies & Infrastructures, Data Science, Machine Learning, Health Analytics, Mathematical Statistics, Intro Bioinformatics, Data Structures & Algorithms, Data Analysis & Regression, Design & Analysis of Experiments

SKILLS

Languages: Python, R, C++, MATLAB
Databases: MySQL, PostgreSQL
Tools: Tableau, AWS, Spark, Jupyter, ImageJ, SPSS, Protégé
Web Technologies: HTML, CSS, JavaScript

INDUSTRY EXPERIENCE

Illumina Data Science Intern **Summer 2021**
- Implemented NLP pipelines with deep learning models from Spark NLP and custom heuristics to extract relevant entities from biomedical corpuses to facilitate the clinical trial enrollment pipeline, improving performance across all metrics by 25% for gene and mutation extractions.
- Classified drug efficacy based on biomedical texts with 97% accuracy using Scikit-learn.

NASA Jet Propulsion Laboratory Research Intern **November 2020 – May 2021**
- Worked on object detection using deep learning with CARLA, YOLO/SSD for advanced driver assistance systems for first responders.
- Implemented a retraining pipeline with Tensorflow's object detection API using Python.

RESEARCH EXPERIENCE

Graduate Researcher, Medical & Imaging Informatics, UCLA **September 2021 – Present**
- Currently developing a context-sensitive knowledge graph for non-small cell lung carcinoma through data mining and Protégé, optimized through constraints and queryable through a user interface using JavaScript.

Undergraduate Researcher, Advanced Robotic Eye Surgery Lab, UCLA **August 2019 – September 2020**
- Scripted an algorithm in MATLAB to perform real-time image segmentation of optical coherence tomography (OCT) volume scans of the retina, to be implemented in a prototype for semi-automated robotic eye surgery.

Undergraduate Researcher, Ocular Motility Lab, UCLA **October 2018 – November 2020**
- Implemented a convolutional neural network using Python to automatically segment OCT blood vessels to facilitate the identification of optic neuropathy biomarkers.
- Independently conducted research, cleaned clinical research data and performed statistical analyses using SPSS and R, visualized data in GraphPad Prism and interpreted trends, first-authored 2 publications.
- Collaborated with graduate students, international clinical fellows, and expert physicians on research projects resulting in poster presentations and 5+ publications.

LEADERSHIP & SERVICE

Publicity Director, Society of Women Engineers - UCLA Chapter **April 2020 - Present**
- Spearheading rebranding to prioritize cohesiveness, accessibility, and presence through design.
- Mentoring incoming freshmen majoring in engineering through one-on-one meetings.

Event Manager, Society of Women Engineers - UCLA Chapter **October 2019 - April 2020**
- Recruited speakers, managed logistics, and moderated a panel on consulting careers for the mentorship program.