

# Yiqiao (Ahren) Jin

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## Education

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

*B.S. in Computer Science*

GPA 3.69 / 4.0 | Expected Graduation: December 2021

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## Experience

### IBM China System Center - Cloud Development Team

*Software Engineer Intern | Beijing, China | June 2019 - Sep 2019*

- Developed backend services for the "Compass" program at IBM Cloud
  - Created "Compass Data Router," a database routing service for "Compass" project based on Go and MongoDB, which reduced memory usage by 30% and accelerated data retrieval
  - Optimized the UI of "Compass" using React and Gatsby.js
  - Wrote professional design documents for "Compass" project
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## Research

### Center for Vision, Cognition, Learning, and Autonomy (VCLA)

*Research Assistant | Advisor: Prof. Song-Chun Zhu | Sep 2019 - Present*

- Work on "3D Scene Parsing" project and implement Graph Neural Networks to reconstruct 3D scene layouts from 2D RGB images using PyTorch
  - Process and annotate VideoCoAtt, a large-scale dataset covering diverse social scenes and interactions with full annotations, which is used to build deep spatial-temporal neural networks
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## Projects

### Magic Poet | Chinese Poem generator based on RNN

*Python / PyTorch | [github.com/Ahren09/Magic-Poet.git](https://github.com/Ahren09/Magic-Poet.git)*

- Devised features including acrostic poetry; trained the generator on datasets of 270,000 tang poems and 60,000 modern verses
- Analyzed performance of applying GAN model, improving rhyme and fluency of generated verses; and reduced training time by 20%
- Resolved conversion between traditional & simplified Chinese characters

### Genome Search System

*C++ | [github.com/Ahren09/Genome-Matcher.git](https://github.com/Ahren09/Genome-Matcher.git)*

- Developed a genome search tool, which maintains a gene pool with genomes of up to 5 million DNA bases
- Decoded raw documents into FASTA files processed by the search system
- Extracted, labeled and processed genomes from NCBL gene bank and discovered latent structures

### Pair | Song matching IOS app based on CNN

*Python / Swift | [github.com/Ahren09/Pair.git](https://github.com/Ahren09/Pair.git)*

- "Pair" recommends songs that best suit the moods of user's image input. The backend is based on APIs of Vision and Spotify.
- Researched preferences of over 3,000 users through Pandas and scikit-learn

## Technical Skills

### Languages

- Python (Advanced)
- C++ (Advanced)
- Go (Intermediate)
- SQL (Intermediate)
- JavaScript (Intermediate)

### Machine Learning

- PyTorch, Keras
- pandas, scikit-learn
- NumPy

### Web Development

- React.js & Gatsby.js
- HTML & CSS
- Flask

### Tools

- MongoDB, PostgreSQL
  - Xcode, gdb, Vim
  - Photoshop, Illustrator, InDesign
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## Activities

### UCLA DataRes

- Data Science research group at UCLA
- Machine Learning Researcher*
- Develop stock price predictor based on LSTM using TensorFlow and Keras

### RYE International

- Professional Business Fraternity
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## Relevant Coursework

Machine Learning  
Algorithm Design & Data Structure  
C++ Object-oriented Programming  
Database System  
Computer Organization  
Operating System  
Discrete Mathematics  
Calculus