

# ZHEN FAN

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## EDUCATION

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**University of Southern California**, Los Angeles, CA Jan 2019–May 2020 (expected)  
Master of Science in Computer Science **GPA: 3.5/4.0**

**University of Illinois at Urbana–Champaign**, Champaign, IL Sep 2018–Dec 2018 (transferred)  
Master of Science in Information Sciences **GPA: 3.8/4.0**

**China University of Mining & Technology Beijing**, Beijing, China Sep 2014–Jun 2018  
Bachelor of Science in Computer Science and Technology **Major GPA: 88.48%**

## SKILLS

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**Languages & Database** Java, Python, Kotlin, Node.js, C++, HTML, CSS, SQL, MongoDB, JSON, YAML  
**Frameworks & Libraries** Android, Socket.IO, Dagger, Flask, Matplotlib, Scikit-learn, Jekyll, React  
**Tools** Git, AWS, Firebase, Jira, Confluence,  $\LaTeX$ , Adobe Creative Cloud

## EXPERIENCE

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**Creative Technologist Intern (Software Engineer), Los Angeles Times**, Los Angeles, CA May 2019–Jul 2019  
· Improved traditional podcast solutions by linking audio clips to articles, allowing users to dive deeper into topics  
· Developed backend server using Python Flask to upload and retrieve audio and metadata  
· Built Android podcast app with Java and Kotlin for the innovative experience of podcast-article continuity  
· Implemented unit tests for Android app; wrote documentation for the software architecture

**Software Engineer & Product Designer, Akaxin Information Technology**, Beijing, China Feb 2018–Apr 2018  
· Implemented Android client in Java for an open-source instant messaging server that had **1,800+ GitHub stars**  
· Built 51 features, added 6 API requests for the 2nd version of app as the only Android developer  
· Eliminated incorrect message status, improved new messages showing speed, and resolved UI & network bugs  
· Introduced redesign of Android & iOS UX with Material Design and Human Interface Guidelines

**Software Engineer Intern, Telepatree Information Technology**, Beijing, China Jan 2017–Mar 2017  
· Created proof-of-concept for a location-based workplace social media product, Telepatree, from scratch in 1 month  
· Presented & discussed the Android prototype with team; attracted investments from interested investors

## PROJECTS

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**Roostoo: Real-Time Crypto Insights** [Google Play] Jun 2019–Present  
· Started project Roostoo to provide cryptocurrency-related insightful data to the public  
· Built and released Android app that has 300+ installs, 100+ monthly active users, and **100% crash-free performance**  
· Designed HTTP and WebSocket APIs; constructed app MVVM architecture; tracked and fixed stability issues  
· Practiced Scrum with team; managed project sprints and documentations using Jira and Confluence

**SemanticAds: Detecting & Replacing Video Ads Based on Brand Logos** [GitHub] Apr 2019–May 2019  
· Developed a tool to remove irrelevant ads in video contents and insert new ads based on brand logos detected  
· Implemented PCA-based video segmentation and classification algorithm and SIFT-based logo detection algorithm  
· Build video player to synchronize audio/video playing and outline detected logos

**Predicting Student Performance (PSP): Machine Learning Research** Jan 2018–Jun 2018  
· Proposed Bias-SVD model for PSP achieving a Mean Absolute Error (MAE) of **6.07/100 points over 281,096 students**  
· Outperformed traditional “historical average” method on Root Mean Square Error (RMSE) by 4.20 points  
· Visualized and analyzed errors based on cold start situations, score ranges, courses, and semesters  
· Awarded *Excellent Graduation Design* in China University of Mining and Technology Beijing (ranked 3/70)

**Waterpipes 3D Reconstruction: Computer Vision Research** Sep 2016–Nov 2017  
· Built Structure from Motion solution for reconstruction of waterpipe inner surface from images and camera poses  
· Contributed a bug fix to popular Structure from Motion system *Bundler* [GitHub] in C++, accepted by original developer

## HONORS

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· *Best Hack that Acts on the Physical World* at Hacktech 2019 with first-aid ride helper Auxilium [DevPost] Mar 2019  
· **First Place** at USC Blockathon 2019 with blockchain-powered smart apartment project Domum [DevPost] Feb 2019  
· **First Place** at Hack{China} 2018 with heart detection dance pad project Dance4Me [GitHub] Apr 2018  
· **First-Class Scholarship** in China University of Mining and Technology Beijing, twice Sep 2016 & 2017  
· **First Place** in 2016 Northern China App Contest with trip planning app Beyond [GitHub] Nov 2016  
· *Senior Software Engineer* certification in IBM Academic Initiative Apr 2016