

# Jonathan Cai

<https://jonathancai.me/>

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## EDUCATION

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- **Rice University**

Houston, TX

*Bachelor of Science in Computer Science; GPA: 3.83/4.00*

Aug. 2017 – May. 2021

**President's Honor Roll:** Fall 2018, Spring 2019

**Relevant Coursework:** Tools & Models for Data Science, Statistics for Data Science, Linear Algebra, Algorithmic Thinking, Intro to Program Design, Principles of Parallel Programming, Fundamentals of Computer Engineering

## SKILLS

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- **Technologies:** Python (PANDAS, NumPy, SciKit-Learn, Jupyter Notebook), Java, Go, JavaScript, React, C, HTML
  - **Tools:** Git, SVN, Node, AWS, GCP, Tesseract OCR, Docker, Vim, L<sup>A</sup>T<sub>E</sub>X, Tensorflow
  - **Languages:** English, Mandarin
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- **RiceApps | Software Team Lead**

Aug 2018 - Current

- **Hedwig:** Lead Agile team of 7 to build full-stack iOS app for campus-wide food delivery at Rice University.
- Utilized React Native, GraphQL, MongoDB, and Stripe API integration to automate payments and transactions.
- Organized weekly sprints, scrum meetings, and Kanban board; coordinated with Rice SRB for launch Spring 2019.

- **Rice University | Undergraduate Teaching Assistant**

Aug 2019 - Dec 2019

- **Tools for Data Science:** Reinforce lecture material with weekly office hours, grade assignments for 80+ students.
- Help students implement standard supervised/unsupervised models and use SQL, MapReduce, Spark, Tensorflow.

- **JP Morgan Chase & Co. | Software Engineering Intern**

June 2019 - Aug 2019

- **Spark:** Used skills with backend API's and frontend React engineering to build a full-stack Java Spring app for hourly asynchronous data ingestion/aggregation/visualization of thousands of loan/bond issuances, each with 40+ fields.
- Leveraged experience with container technologies to establish DevOps pipeline using in-house Jenkins adaptation, automating code vulnerability scanning/testing to increase developer efficiency and reduce development cycle.

- **Sihua Technologies | Software Engineering Intern**

June 2018 - Aug 2018

- **GitOps:** Achieved 70% decrease in average platform deployment time by re-engineering CI/CD pipeline.
- Automated the deployment of product features on local Docker Swarm and Kubernetes clusters triggered by internal Gitlab file changes, utilizing Golang concurrency constructs and Slack API for developer error reporting.
- **Notifications:** Engineered primary notification system for end clients through Gmail, Dingtalk, WeChat, and Slack.

## PROJECTS

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- **News Sentiment:** Explored 6 different sentiment analysis methods on the news, measuring correlation with stock prices. Used Word2vec embeddings, Tensorflow, Scikit-learn, Pandas, and New York Times API for data mining.
- **Rackr (1st Place at Capital One SES Hackathon):** Receipt scanning/tracking iOS app with personal finance metrics and visualizations. Utilized Google Vision API for OCR, Flask backend, and ngrok for local server hosting.
- **News Visualization (3rd Place at AT&T Entertainment Hackathon):** Illustrated a network of political figures related through news articles using NLTK library for lexical tagging/classification. Won among 150+ participants.
- **SER Jobs (JPMorgan Code for Good Challenge 2018):** Redesigned job-seeking application form for a local Houston NGO, SER Jobs to optimize client retention using Flask backend, JavaScript, and a MySQL database.
- **Bike-Share Data Analysis:** Analyzed and visualized LA bike-share data with React and Python data processing. Selected as one of 26 winning projects of 250+ applicants to attend the 2019 Capital One Software Engineering Summit.

## LEADERSHIP/EXTRACURRICULARS

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- **CoderDojo:** Volunteered on weekends Summer 2018 as mentor to help 20+ middle school kids learn programming.
- **Jones College Government:** Orientation Week Advisor, Peer Academic Advisor, Special Services Coordinator, IM Sports Coordinator, Powderpuff Coach
- **Rice University:** RiceApps, Rice Club Basketball Team, Rice Computer Science Club, Rice Legalese Club