Spencer Chang

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EDUCATION

Rice University, Houston, TX — Expected Graduation May 2019
Bachelor of Science, **Computer Science**
Minor, **Business**; Certificate**, Engineering Leadership** — GPA: 3.87

SKILLS

Languages: Python, Java, JavaScript, Ruby, HTML, C; *Novice*: SQL
Software & Frameworks: Git, Ember, Rails, Jupyter; *Novice*: React

EXPERIENCE

Square Capital | *Software Engineering Intern* | San Francisco, CA — May – August 2017

- Created and designed full stack application using EmberJS and Ruby on Rails to provide a general solution for anyone to upload their customer data and offer their merchants loans without any engineering work
- Designed RESTful endpoints and used protobufs to ingest the data and persist it in the main Capital database to generate offers and implemented scheduled jobs with Sidekiq to pull data from Google Cloud
- Upgraded Sidekiq to the latest version (5x throughput) for the Capital-wide repo and deployed to production

Rice University Algorithmic Thinking | *Teaching Assistant* | Houston, TX — January – May 2017

- Taught students material for the core algorithms class at Rice during labs and office hours

PROS | *Software Development Intern* | Houston, TX — June – August 2016

- Created new dialog to select multiple filters for filtering sales data, a highly requested feature by customers, which was so well-received that it was showcased in the quarterly State of the Union address to the company
- Implemented Neighbor Watch, a machine learning algorithm used for precise pricing segmentation, in Scala and Spark and used Azure HDInsight to parallelize processes on the cloud

EMBRACE | *Software Developer* | Houston, TX — January – June 2016

- Worked on web application for EMBRACE, non-profit for teacher productivity, using Python and Django, HTML/Javascript, and SuveyMonkey API

PROJECTS

Hurricane Harvey Analysis | *Rice University* — August 2017

- Analyzed data on the Rice community's needs post-storm and identified actions for the Provost and the administration to alleviate pressure on staff, faculty, and students, using Python and pandas

Q&A Slack Bot | *Square Intern Hackathon* — July 2017

- Created a Slack bot using Python to train on messages in a channel and learn answers to FAQs through identifying questions, grouping them with word2vec, and finding repeated sequential answers to save employee hours
- Designed learning algorithm for the bot to adapt to changing "correct" answers and live demoed to company

Part-of-Speech Tagger | *Rice University* — May 2016

- Created 2nd and 3rd order hidden Markov models using varying amounts of a large training dataset of sentences with their words tagged already to analyze how the accuracy of prediction varied with amount of training
- Implemented Viterbi algorithm in Python for the prediction function, achieving over 90% accuracy on test dataset

LEADERSHIP

Rice CS Club (Rice ACM) | *President (2017-Present), External Vice President (2016-2017)* — March 2016 – Present

- Lead club to achieve yearly goals and launch new initiatives, including a summer meetup for incoming freshmen, more technology workshops, and community bonding events
- Managed communications with companies and outside organizations and coordinate events for them to connect students with technology opportunities (including leading sponsorship advertisement for HackRice)

Rice Entrepreneurship Club | *Executive Board Member* — December 2015 – Present

- Collaborate with Rice's Entrepreneurship Initiative to plan events to promote entrepreneurship and startups