Max Mines

69 Brown St, Box #8112 | Providence, RI 02912 | Phone: (267) 251 6555 | email: max_mines@brown.edu

EDUCATION

Brown University, B.A. Computer Science & B.A. Cognitive Science *4.0/4.0 in-major GPA* Expected Graduation May 2020

Relevant Courses: Software Engineering, Computer Systems, Computer Vision, Machine Learning, User Experience/User Interfaces, Honors Linear Algebra, Statistical Methods

PROFESSIONAL EXPERIENCE

Sana Labs, *Software Engineering & Linguistics intern* Summer 2019

- In Python, designed and implemented phoneme-level remediation for a speech pronunciation product. Inspired by IPA's phoneme traits, remediation dynamically generated based on user's utterance and the correct pronunciation.
- This feature ships with Sana Voice API, used by client Pearson Education by over 5k English language learners.
- In React, maintained web demo for Sana Voice (voice.sanalabs.com), created new prototype products to showcase the API.

University of Pennsylvania, Prof. Ani Nenkova, *Research assistant* Summer 2018

- In Python, created HealthLit, a search engine that uses Natural Language Processing to intelligently organize medical literature from clinicaltrials.gov.
- Used "Semantic Role Labeling" & medical taxonomy SNOMED to solve design challenges.
- Findings later published by Association of Computational Linguistics.

University of Pennsylvania, BabyLab, *Research assistant* Summer 2017

- Worked with chair of psychology department, Daniel Swingley, researched how infants learn language.
- Led "language-guided looking experiments" on subjects, designed visual and auditory test queues.
- Used R to visualize and analyze newly-acquired data of 70+ participants across 4 studies.

PROJECTS

Sheet Music to MIDI converter, written in Python May 2019

- Program converts JPEG image of sheet music to digital representation, plays aloud handwritten music in seconds.
- Detects note pitch and rhythm across multiple lines of music.

Maps, written in Java and JavaScript April 2019

- Maps app inspired by Google Maps, finds routes between two locations using A* algorithm.
- Web-based GUI displays real street data from greater Providence area, supports pan & zoom, click intersections to select, autocomplete when typing street names.
- SQL data from OpenStreetMap, calls optimized to load only the streets needed for current window view.

Image Local Feature Matching, written in Python February 2019

- Implemented algorithm that matches local features between multiple images of real-world scenes.
- Design modeled after David Lowe's SIFT key point detector.

Search Engine for Wikipedia, written in Scala March 2018

- Search engine that queries a large collection of Wikipedia pages, allows users to search strings, returns best matches.
- Implements Google's PageRank algorithm.

LEADERSHIP

Brown Club Squash

- Multiple team practices per week, travel to play away matches, open sessions to teach new players

Bassist, Brown University Jazz Big Band

- Double bass/bass guitar player, 4 concerts per semester, group tours internationally.
- Organize and MC weekly music soirées open to all types of creative music.

TECHNICAL SKILLS

Java, Python, C, Scala, OCaml, JavaScript, React, Scheme, SQL, HTML/CSS

SKILLS & INTERESTS

French: studied Fall 2018 at Sciences Po in Lyon, France. All courses taken in French.

Music: "Language Please" indie project. Independently wrote, recorded, engineered and published two EPs available on Spotify and Apple Music, 5k+ streams. Manage all aspects of marketing, branding. Perform multiple shows per month with band.