

# MICAH JAFFE

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## SKILLS

JavaScript, React.js, Redux, Ruby on Rails, Ruby, SQL, Git, HTML5, CSS3, Python, Matlab

## EXPERIENCE

### Software Development Technical Instructor

*App Academy*, Feb 2019 - Present

- Taught fundamental programming concepts (data structures, control flow, debugging, Test-Driven Development, Object-Oriented Programming) to 64 students.
- Led 20 hours per week of hands-on instruction in Ruby, leading to 100% student retention to date.

### Technical Data Analyst

*SmileDirectClub*, Aug 2017 - Aug 2018

- Built \$3.2B company's marketing data analytics infrastructure of 71 data models using SQL and dbt.
- Automated repetitive SQL tasks with Jinja2 macros saving 10% of analyst development time.
- Designed 42 dashboards in LookML streamlining smarter allocation of >\$100M marketing budget, resulting in estimated cost savings of >\$10M.

## PROJECTS

### Caesarnote

[Live Site](#) | [Github](#)

*A cryptographic cloud-based note-taking app (React, Ruby on Rails, PostgreSQL, Quill.js)*

- Developed modular React components and extensible Redux state for arbitrary filters, reducing implementation time of add-on features such as Search and Trash Bin by 80%.
- Designed custom algorithm for ciphering rich-text HTML5 strings using regular expressions and modular arithmetic, enabling performant and scalable keystone feature.
- Integrated Quill.js library for rich-text editing and media uploads with customized toolbar styling, leading to seamless user experience across 18 different text markup options.

### TravelX

[Live Site](#) | [Github](#)

*An all-in-one attraction-planning travel app (MongoDB, Express, React, Node, Material UI)*

- Designed original UI/UX for search results page by combining aesthetic Material UI components with custom CSS3, resulting in polished and functional core app view.
- Integrated Google Places API to retrieve attraction data from RESTful backend routes, leading to dynamic and varied schedule content (ratings, reviews, photos) to captivate user attention.

### Maze Runner

[Live Site](#) | [Github](#)

*A maze-solving browser game that pits human against algorithm (JavaScript, HTML5, CSS3)*

- Engineered custom 3D first-person engine using raycasting, improving game speed and playability by >50% compared to heavy external 3D libraries.
- Implemented AI players using customized step-wise versions of DFS, BFS, and A\* graph search algorithms, leading to a challenging and competitive user experience.

## EDUCATION

**University of Pennsylvania**, School of Engineering (May 2017)

B.S.E. in Systems Engineering, Minor in Mathematics, Summa Cum Laude, 3.89 / 4.00 GPA

**App Academy** (Oct 2018)

#1 ranked immersive 1000-hour full-stack software engineering course (<3% acceptance rate)