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# Derek Miranda

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## TECHNICAL SKILLS

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**Strong** | JavaScript (ES7), React, Node, Express, MongoDB, Modular Design, Data Structures, WebSockets, WebRTC, Git, HTML5, MVC, Object-Oriented and Functional Programming  
**Experienced** | PostgreSQL, Redux, Vue, Heroku, Webpack, Mocha, Chai, Python, WebGL/Three.js, LAMP, C/C++, Unix, MATLAB, Windows Batch, Adobe Creative Suite

## EXPERIENCE

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- Nile.js** | *Software Engineer* | *Scalable peer-to-peer video streaming* 2017
- Built scalable peer-to-peer streaming capability by harnessing added viewers as a new broadcaster for the stream
  - Facilitated video broadcasting by using WebTorrent to mobilize network of viewers in sharing data with their peers
  - Enabled asynchronous transfer of WebRTC session descriptions between the server and browser with WebSockets
  - Limited WebSocket connections to minimize server port, thread, and memory usage, propagating information to peers through client-maintained WebRTC connections
  - Created Node middleware to allow viewing peers to discover peers and exchange WebRTC session descriptions
  - Ensured WebRTC peer connectivity by confirming data transfer between clients through the signaling server
- Riot Games** | *IT QA Support* | Los Angeles 2016-17
- Utilized Python's path and shutil libraries to facilitate Rainmeter skin compilation and installation
  - Developed AutoHotKey application to automate desktop PC checks by confirming application execution and settings
  - Leveraged Rainmeter's built-in Google Calendar integration to visibly display busy times for conference rooms
- 4WT Media** | *Freelance Video Editor* | Los Angeles 2015-16
- Used JavaScript to apply modifiable animation curves, generate multiple visual assets, and enable quick iteration on motion graphic deliverables in After Effects
  - Wrote Bash script to log file size and path to a CSV to ensure complete migration of 20+ TB between media servers

## PROJECTS

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- Artsa** | *Real-time Social Drawing*
- Enabled desktop and mobile drawing by rendering paths on mouse and touch events in an HTML5 canvas
  - Implemented WebSockets to broadcast stroke data made by one client to everyone else
- WikiMe** | *Note-taking Tool*
- Reinforced user data persistence by implementing note auto-save feature, using timer to update state after user input
  - Utilized MongoDB's flexible data schema to implement graph-like associations between documents
- Seekers** | *Resume Builder for Software Engineers*
- Implemented RESTful API to allow interaction between resume-editing UI and database
  - Provided users with augmented UI functionality by using conditional React components based on login status

## EDUCATION

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- University of California, Irvine** | *B.S. Civil Engineering* 2011-15
- Relevant Courses: C/C++, Linear Algebra, Statistics, MATLAB, Linear and Nonlinear Models, Multivariable Calculus

## INTERESTS

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I enjoy critical film and media analysis, playing weird indie games, and dancing, especially hip-hop and funk styles.