

# ANDREW WANG

## SOFTWARE ENGINEER

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## Skills

### TECHNOLOGIES

Ruby  
Ruby on Rails  
Javascript  
Python  
Java  
React/Redux  
SQL  
MongoDB  
HTML5  
CSS3  
D3.js  
Git  
GraphQL  
WebGL  
nodeJS  
Express  
Linux  
Android

### NOTABLE COURSEWORK:

Computer Science:  
Data Structures,  
Computer Architecture,  
Software Methodology,  
Principles of  
Information and Data  
Management,  
Introduction to Artificial  
Intelligence.

Mathematics: Linear  
Algebra, Graph Theory,  
Theory of Probability,  
Cryptography,  
Differential Equations,  
Real Analysis

## Projects

**Harmony** Jan. 2019 to Current  
Fullstack React/Rails Discord Clone  
Optimized AJAX requests by automatically filtering results by user, reducing loading times  
Incorporated ActionCable websocket framework for real time text messaging  
Built specific design patterns used by the actual Discord to provide ease of integration for future features.

**A\* Pathfinder** Feb. 2019 to Current  
Javascript implementation of heuristic pathfinding algorithms in a discretized grid environment.  
Software generates randomized grid terrain (e.g: Civilization games maps) and start and goal vertices.  
User chooses one of various heuristic functions in the A\* search family to find a path between the vertices.  
Analyzed time/space complexity of each algorithm to provide comparison points.

**Chess** Dec. 2016  
Android chess application implemented with Java and Android Studio.  
Uses java.io.Serializable interface for game recording, playback, and local storage.

## Employment

**Freelance Full Stack Developer** Remote/NYC  
**Self-Employed** May 2019 to Current  
Full stack application development using Ruby on Rails, React, Postgres, d3.js, and WebGL.  
Leveraged technical and mathematical expertise to architect database schema and data visualization for client's web application.

**Web Administrator** Remote  
**US Air Force Parent's Association of New Jersey** 2017 to Current  
Creator and administrator of NJAFA Parent's Association website  
Renovated and automated many features including signup, payment, and event organization (including ecommerce)  
Manage 200 users and communications with the official AFA parent's liaison

## Education

**App Academy** Nov. 2018 to Feb. 2019  
**Software Development**  
1000 hour immersive software development course with focus on full stack web development

**Rutgers University** 2013 to 2018  
**BA Mathematics**  
**Minor Computer Science**  
**Minor Music**

**Hong Kong University of Science and Technology** 2015  
**Study abroad Summer**  
Coursework in C, Python, and electro-robotic design