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Projects

InsanFran (Ruby on Rails, PostgreSQL, React, Flux)   Live | Github
Full-stack app for sharing San Francisco photography (inspired by Instagram)
• Utilizes raw SQL queries to create a filtered feed on the user home page
• Implements Infinite Scroll by fetching three posts at a time from database when user
  has scrolled to bottom of page
• Custom user authentication system that utilizes BCrypt library to hash passwords

99Bridges (Ruby on Rails, React, Flux, React-Bootstrap)   Live | Github
Original full-stack application to locate and track information on bridges
• Google Maps API to place map, markers, and info-windows in the document
• Represents the surface area of a bridge with a Google Maps polygon object
• Custom user authentication system that utilizes BCrypt library to hash passwords

Sudoku Solver (Javascript, HTML5 Canvas)   Live | Github
• Uses a backtracking algorithm to solve a stored or user-created sudoku board
• Processes animations asynchronously from a queue for algorithm visualization

Tron (Javascript, jQuery, HTML5, CSS)   Live | Github
• Game logic tracks player and wall locations to detect collisions
• All rendering done by manipulating HTML elements and CSS with jQuery

Chess AI (Ruby)   Github
• Computer player uses minimax algorithm with alpha-beta pruning to analyze moves
• Polymorphism (all pieces inherit from a parent *Piece* class) and modules (*Slideable /
  Steppable*) used to keep code DRY.

Skills

Ruby	Javascript	React.js	HTML	SQL
Ruby on Rails	jQuery	Flux	Git	CSS

Education

Drexel University | Philadelphia, PA | 2004-2010
• BS/MS in Civil Engineering

Work History

Structural Engineer - *Ammann & Whitney* | Philadelphia, PA | 2013- 2016
• Oversaw the design of a steel-girder bridge with architectural landscaping that
  spans the Vine Street Expressway (I-676) in Philadelphia.
• Developed VBA Macros to accelerate the analysis of output from 3-D structural
  modeling programs; these tools were implemented throughout the company for
  several large projects

Bridge Designer - *Speciality Engineering Inc* | Bristol, PA | 2009 - 2013
• Trained and managed a small team that performed 3-D structural analyses and
  planned rehabilitations of curved ramps along the Interstate-95 highway.
• Developed a structural analysis program for arch bridges using MATLAB that
  automated analyses and allowed engineers to avoid error-prone calculations

momajd.com   github.com/momajd   linkedin.com/in/momajd