Max Plomer

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Education

App Academy Sept 2014 - Nov 2014

Coding Bootcamp in New York, NY

University of Connecticut Completed May 2013

Master of Science in Mechanical Engineering, GPA: 3.5/4.0

University of Connecticut Completed Dec 2010

Bachelor of Science in Mechanical Engineering

Experience

Gramercy Consultants July 2015 - Dec 2015

New York, NY

• Crafted a great user experience for commercial real estate brokers with an HTML / JS front-end and straightforward JSON API routes customized for the front-end to consume

• Created secure digital downloads feature using Stripe API to process payments; each download link contains a cryptographically strong token generated by SecureRandom's urlsafe\_base64 method

• Setup authentication stack using Devise / CanCanCan / Rolify for secure API calls and user permissions

• Analyzed new project proposal for multiplayer browser-based game; evaluated tools (Ruby, JavaScript, Mongo, PostgreSQL, Ruby on Rails, Volt, Ember.js, Meteor, Unity3D) to solve the problem statement and chose the best solution to bootstrap a playable prototype

• Optimized real-time Volt app with a complicated data/model structure; finished features such as reset password that are built into the Volt User System, but were not yet finished by the Volt team

The Psalm of Howard Thurman Documentary Film Apr 2015 - May 2015

Boston, MA

• Used Adobe Muse to generate the most cutting-edge single-page flat user interface

• Deployed Adobe Muse app in hosting environment that supports PHP server-side scripting

• Explored many template and design technologies, such as Twitter Bootstrap templates and scratch coding CSS/JS

• Helped refine content and customize Muse template to best tell the story of Howard Thurman

Staging URL => http://www.jsbox.co/howardthurman

Free Fundraise.com Mar 2015 - May 2015

Boston, MA

• Engineered API-driven Backbone.js app enabling you to shop and give the advertising affiliate fees generated to the charity of your choice

• Designed and programmed user interface in Backbone.js with carousels built on jQuery fading methods

• Allowed users to either select a featured charity, or to explore all, which adds a selected charity to the featured collection as well as activating it for donations

• Integrated charity tracking-ids into each unique set of query string parameters required by Amazon, eBay and FlexOffers affiliate programs

Outlearn.com Jan 2015 - Feb 2015

Boston, MA

• Researched technical training topics and formatted content into prototype format

• Integrated with GitHub through importation of repositories and allowing login using GitHub account

• Experimented with JavaScript Fancytree library, a dynamic tree view plugin for jQuery, to display imported contents

• Engineered advanced coding challenges using RSpec tests for Ruby and Jasmine tests for JavaScript

• Created interactive terminal sessions for Ruby, JavaScript and PHP using jq-console, a jQuery plugin

Westport, CT and World Maker Faires Apr 2014 (Westport) and Sept 2014 (World)

Westport, CT and New York, NY

• Presented the science behind my software package Clean Fuel Chemical Kinetics and how it can be used to model clean fuels in the engines of tomorrow

• Articulated reaction rate and Lagrange multiplier problems to teach science and math to faire attendees

Saigeworks LLC May 2014

Trumbull, CT

• Utilized my chemical kinetics software to transform inventor’s hands-on experience into concrete engineering terms

• Determined that 2.4 kJ of work and 3.3 kJ of heat for methane, and 3.0 kJ of work and 5.1 kJ of heat for hydrogen, was produced in one cycle per gram of fuel and oxygen at stoichiometric ratio

University of Connecticut Jan 2011 - Dec 2012

Storrs, CT

• Teaching Assistant for Combustion, Compressible Flow, Renewable Energy, and Senior Design Project classes

Projects

Carbon Footprint.co May 2015

github.com/maxplomer/carbon-calculator

• Architected AngularJS app that performs carbon footprint calculation and persists data to Ruby on Rails back-end

• Added user authentication using the angular-devise service, and charted user progress with the angular-charts component

• Sent result of footprint calculation, coded in Ruby, to the AngularJS front-end via API as an attribute in the ActiveModel Serializer

Andrew Talty.tv Apr 2015

github.com/maxplomer/andrewtaltytv

• Used jquery-tubular plugin to display a responsive YouTube video in the background of a TV producer’s Ruby on Rails portfolio page

• Detected client’s browser type using JavaScript’s navigator object, then displayed a still image background for mobile devices

• Created a subtle effect by blurring social media and video control buttons using the text-shadow CSS attribute

JavaScript Sandbox.com Dec 2014

github.com/maxplomer/javascript\_sandbox

• Constructed online code testing environment using Ruby on Rails and Backbone.js, great for evaluating HTML, CSS and JavaScript code in the browser

• Architected user authentication using a current\_user Rails controller and corresponding current\_user Backbone.js Model  
• Selected the Bootstrap navbar component to create an intuitive site navigation

Real Estate Tracker.co Dec 2014

github.com/maxplomer/real\_estate\_tracker

• Presented complex financial analyses for investment properties using instantly updating forms and compelling diagrams

• Communicated data to API using jQuery Ajax requests from within the Ruby on Rails rendered view

Coding Challenges.co Nov 2014

github.com/maxplomer/coding\_challenges

• Enlisted Ruby on Rails to create a community where users can compete and boost their programming skills

• Harnessed Ace high performance code-editor to deliver code syntax highlighting for Ruby, JavaScript and SQL

• Jailed user-submitted code as to only permit safe method calls

Bit Chart.co Nov 2014

github.com/maxplomer/finance-clone

• Built stock investing competition application using Ruby on Rails and Backbone.js; a pure Rails version was also created

• Applied Heroku scheduler and market\_beat ruby gem to save stock market quotes to a PostgreSQL database

• Graphed user portfolio performance using Highcharts pure JavaScript library; calculated chart data using algorithm optimized for least SQL queries

Clean Fuel Chemical Kinetics June 2013 - Dec 2013

combustionhelp.com

• Programmed simplified chemical kinetics software package in MATLAB; a version using hybrid of GNU Octave and Fortran was also created

• Investigated CHEMKIN-II mechanism format, Arrhenius/Lindeman/Troe form reactions, calculating thermodynamic data from NASA polynomials, programming language speeds and license costs

• Applied MATLAB profiler to improve program inefficiencies; time to converge constant volume reactor with methane fuel was reduced from 619 sec to 0.8 sec

Technology Skills

Languages => Ruby, JavaScript, HTML, CSS, SQL, MATLAB, C, Fortran

Tools => Ruby on Rails, jQuery, AngularJS, Backbone.js, Ember.js, Git, Linux, AWS, Heroku

Hobbies => Raspberry Pi, Unity3D Game Engine, Surfing, Biking

Favorite Ruby Gems => rest-client, whenever