Max Plomer

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Education

App Academy - Code Bootcamp

New York, NY

Sept 2014 - Nov 2014

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

Storrs, CT

completed May 2013

University of Connecticut - Bachelor of Science in Mechanical Engineering

Storrs, CT

Dec 2010

Experience

The Psalm of Howard Thurman Documentary Film - Developer

Boston, MA

starting Apr 2015

• Generated Ruby on Rails app using Rails Composer, integrated customized Bootstrap Template and styled modal

• Adapted the Devise-Bootstrap user management system provided by Rails Composer into an admin dashboard

• Utilized sendgrid-ruby gem to email Contact Us messages and subscribe requests using SendGrid API

• Empowered artist to edit site content and then see updates instantly by using Google Drive shared folder as a web server

• Authored YAML representation of site data that is hosted in Google Drive and parsed by the Rails app during requests

• staging URL => http://howardthurmanfilm.herokuapp.com

FreeFundraise.com - Developer

Boston, MA

starting 2015

• Engineered API-driven Backbone.js app that allows you to shop and give to the charity of your choice for free

• Designed and implemented user interface with carousels programmed in Backbone.js, using jQuery fading methods

• Using model and collection operations allowed users to either select a featured charity or to explore all charities

• Integrated with Amazon, eBay and FlexOffers affiliate programs by investigating all required formats of passing query string parameters, which allowed tracking of the charity being donated to

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

Outlearn.com - Consultant

Boston, MA

Jan 2015 - Feb 2015

• Researched topics to facilitate technical training, and formatted content into prototype format

• Integrated with GitHub by importing 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 - Presenter

Westport, CT and New York, NY

Apr 2014 (Westport) and Sept 2014 (World)

• Presented the science behind the Clean Fuel Chemical Kinetics software package 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 - Consultant

Trumbull, CT

May 2014

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

• Determined 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 produced in one cycle per gram of fuel and oxygen at stoichiometric ratio

University of Connecticut - Teaching Assistant

Storrs, CT

Jan 2011 - Dec 2012

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

Projects

CarbonFootprint.co

http://www.github.com/maxplomer/carbon-calculator

May 2015

• Architected form-driven AngularJS app that persists data to Ruby on Rails backend

• Added user authentication using Devise and angular-devise AngularJS service, and plots with angular-charts component

• Designed architecture to perform carbon footprint calculation in Ruby on the backend and send result to AngularJS frontend via API as an attribute in the ActiveModel Serializer

AndrewTalty.tv

http://www.github.com/maxplomer/andrewtaltytv

Apr 2015

• Ruby on Rails app that uses jquery-tubular plugin to display a responsive YouTube video in portfolio page background

• Detected browser type using jQuery browser identification then displayed a still image background for mobile devices

• Blurred social media and video control buttons using the text-shadow CSS attribute

JavaScriptSandbox.com

http://www.github.com/maxplomer/javascript\_sandbox

Dec 2014

• Constructed online coding playground using Ruby on Rails and Backbone.js, great for evaluating user-submitted HTML, CSS and JavaScript code safely in the browser

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

RealEstateTracker.co

http://www.github.com/maxplomer/real\_estate\_tracker

Dec 2014

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

• Communicated data to server using jQuery Ajax requests from the Ruby on Rails view

CodingChallenges.co

http://www.github.com/maxplomer/coding\_challenges

Nov 2014

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

• Utilized 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

BitChart.co

http://www.github.com/maxplomer/finance-clone

Nov 2014

• Built stock investing competition application using Ruby on Rails and Backbone.js

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

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

Clean Fuel Chemical Kinetics

http://www.combustionhelp.com

June 2013 - Dec 2013

• Programmed simplified chemical kinetics software package in MATLAB; a GNU Octave-Fortran version 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, SQL, HTML, CSS, MATLAB, C, Fortran

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

Hobbies => Raspberry Pi, Unity3D Game Engine

Favorite Ruby Gems => rest-client, whenever