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

The Psalm of Howard Thurman Documentary Film Starting Apr 2015

Boston, MA

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

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

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

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

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

Staging URL => http://howardthurmanfilm.herokuapp.com

FreeFundraise.com Starting Mar 2015

Boston, MA

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

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

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

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

Outlearn.com Jan 2015 - Feb 2015

Boston, MA

• 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 Apr 2014 (Westport) and Sept 2014 (World)

Westport, CT and New York, NY

• 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 May 2014

Trumbull, CT

• Utilized my chemical kinetics software to help transform inventor’s 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, 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, Senior Design Project

Projects

CarbonFootprint.co May 2015

github.com/maxplomer/carbon-calculator

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

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

• Sent result of Ruby footprint calculation to AngularJS frontend via API as an attribute in the ActiveModel Serializer

AndrewTalty.tv Apr 2015

github.com/maxplomer/andrewtaltytv

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

• Detected browser type using simple JavaScript browser identification, 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

JavaScriptSandbox.com

github.com/maxplomer/javascript\_sandbox

Dec 2014

• Constructed online coding playground 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

RealEstateTracker.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

CodingChallenges.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

BitChart.co Nov 2014

github.com/maxplomer/finance-clone

• Built stock investing competition application using Ruby on Rails and Backbone.js (there is also a pure Rails version)

• 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; prepared 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, 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