Jonathan Mares Resume

Phone: 914-450-1257

Education

Cornell University, Bachelor of Science; GPA: 3.02; May 2017

Double Major in Chemical Engineering & Computer Science

Industry Experience

Wayfair - Software Engineering Intern

Summer 2016, Boston, MA

- Rebuilt customer facing Address Book freelance
- Enabled client side add/remove/edit features with Backbone & Tungsten.js
- Redesigned page architecture: Wrote PHP & frontend Tungsten.js MVC components & implemented Mustache templating
- Overhauled internal order search page used by thousands of employees

Pfizer - Software Engineering Associate

January - May 2016, New York, New York

- Designed and implemented an internal full stack JavaScript web app in MeteorJS
    - Converted customer business requirements such as drag-and-drop and mobile compatibility into technical specifications
    - Designed UI with Materialize & built frontend with the Blaze JavaScript library
    - Utilized Meteor & npm packages such Autoform, iron-router, & dragula.js
    - Stored data with MongoDB & enforced schemas with simple-schema package
    - Configured custom deployment on Red Hat Linux with Passenger
- Upgraded internal site to implement Angular 1 & conform to mobile first standards
- Acted as Business Analyst on an internal platform. Focused on improving front end & implementing

Material Design standards.

Novartis Vaccines - Process Engineering Intern

Summer 2014

I spent a summer working on defining a pilot scale emulsion process, varying things like mixing speed, emulsification time, and pump rates. I also measured particle size and did a little HPLC.

IPS- Integrated Project Services – Project Engineering Intern

Summer 2013

Hi-Tech Pharmacal – Validation and Technical Services Intern

Summer 2012

MaggioMares - Full Stack Developer

Co-started shop specializing in fast, responsive, & lightweight websites for small businesses (Clients include restaurants, real estate agents, & other professionals).

- Built website for Zaferon Grill using Jekyll, hosted on Github pages
- Consult for Zaferon's technology needs
- Manage website maintenance for a few other websites

Collaborative Projects

Personal Projects

Espresso

A React-Native app to help people save money for products they'd like to buy.

LiveGroceryList

A Flask app to share grocery lists with family members. Heroku & PostgreSQL.

Hackathons

dineR – Team Lead & App Architect

Tinder for meals near you. Built a Meteor Ionic app with React at Wayfair's company wide hackathon. Presented to the CEO & CTO. Only intern team to win as finalists.

ReadMe-dot-Text HackCooper @ Cooper Union, NY

Hackathon app that converts images into speech for the visually impaired. Built on IBM Bluemix with Watson text-to-speech API, Leap Motion for gesture recognition, and ABBYY FineReader for optical character recognition. IBM API prize winners.

Skills

I describe myself as a full stack engineer.

Backend

My best language is Python, which I use for scripting, implementing algorithms, and building apps with Flask. I have working experience in PHP and with ES5/ES6 Javascript with MeteorJS and Express. In the past I have done some Java but it's been a while. I've used C in my systems and OS projects. I have a little experience with Microsoft SQL Server and MongoDB.

Frontend

I have a working understanding of React, Backbone, Mustache and Handlebar templating, jQuery. I can work with SASS, Less, and CSS. I have limited knowledge of Angular. I'm beginning to use webpack and Redux for my projects. I'm also learning React-Native.

Misc

I'm a beginner Docker user. I've deployed on Heroku, Galaxy. I use Git for all of my projects.

I can use Mathematica and Matlab for basic computations. Both Physical Chemistry and Numerical Analysis had me using these.

One time I could call myself an Ocaml user.

Courses

Computer Science

I have taken all of the core requirements to graduate as a computer science student from Cornell. My coursework has included Systems Engineering, Operating Systems, Algorithms, Functional Programming and Advanced Data Structures, Discrete Structures, Intro to Artificial Intelligience, Computational Genomics, and Numerical Analysis.

Chemical Engineering

I have taken all of the core requirements to graduate as a chemical engineer from Cornell. This has included Heat and Mass Transfer, Fluid Mechanics, Seperation Processes, Kinetics & Reactor Design, Process Dynamics, Unit Operations Lab, and Chemical Engineering Design. In addition to the engineering calculus, physics, and chemistry sequences, I have also taken Organic Chemistry, Honors Physical Chemistry I & II, and both Organic and Physical Chemistry Laboratory.

Research and Chemical Engineering

Putnam Lab Group – Drug Delivery Researcher

- Designed and ran experiments to define a new hydrogel material
- Conducted spectroscopy, protein release, and hydrogel degradation
- Publication: Ricapito, N., Mares, J., … (2016), Insight into the Unexpected Degradation of Dihydroxyacetone-Based Hydrogels. Macromolecular Chemistry & Physics.

Capstone Chemical Process Design

Prepared a full scale feasibility study of a Penicillin production process. Technical work included reactor and distillation column design, Aspen Plus simulations, a robust pro- cess flow diagram, and economic analysis (capital and operating cost estimation).