Frederick Brunn

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Education

B.S. in Computer Science – Expected May 2017 – Stony Brook University – Stony Brook, NY

Experience

Software Engineer Internship – May 2015 through August 2015 – Bren-Tronics, Inc. – Commack, NY
- *Develop C# application that monitors ARM-enabled battery chargers via JSON over UDP and visualizes data in novel ways with OxyPlot library*
- *Develop C# application to test home energy system using SCPI*
- *Debug UART communication to 3G cellular module using Atmel C*

Robotics Specialist Internship – June 2014 through August 2014 – SonAER Ultrasonics – Farmingdale, NY
- *Develop electronics and modified firmware solution for use in an ultrasonic atomizer nozzle 3D printer*
- *Research solutions through networking with professionals in the medical equipment field, including attendance at the MD&M East 2014 industry conference*

Projects

Canary Life
- Develop a Node / Express / SCSS / Pug / Firebase web application deployed at https://canary-life.firebaseapp.com/ consisting of an HTML5 Canvas game, campaign, level creator, message board and wikia as part of a team of four

RedditScraper
- C# program that uses HTML Agility Pack to scrape the main content and comments into local HTML files

wallpaper-reddit
- Python program; scans JSON headers of posts from the user-supplied subreddits, then chooses an image among them to be resized and set as the desktop wallpaper
- Vital program functionality fixes and configuration fixes

Skills

- *Node.js, Express, SCSS, Pug/Jade, Firebase, Grunt*
- *JSP, MySQL, Apache Tomcat*
- *JavaFX, C#, WPF*
- *PHP, Python*
- *Trello, Git, GNU/Linux, Blender*

Coursework

Front-End / Project Manager – Software Engineering – CSE 308
- Develop and deploy a scalable hybrid web application with focus on marketability and UX
- Organized team using Agile-based workflow, Trello board and feature-branch based Git hosted on Bitbucket

Front-End – Internet Programming – CSE 336
- Develop JSP / Angular / ajax web applications in the context of e-commerce applications

Back-End – Principles of Database Systems – CSE 305
- As a team of three, create a social network web application using the JSP / MySQL / Apache Tomcat stack
- Learn relational algebra, relational query optimization

Front-End / Application – Computer Science III – CSE 219
- Develop a JavaFX program to simulate seasons of fantasy baseball using JSON data and CSS3 stylesheets
- Implement style and design patterns and interfaces in the context of long-term software development

3D Modelling – Introduction to Multimedia – CSE 334
- Produce a short 3D-animated film in Blender with custom models, textures, shaders, materials and animation

Education – Research in Computer Science – CSE 487
- Collaborate with faculty to develop coursework for Computer Science I and III
- Develop final project, to be implemented in JavaFX

Extracurricular

Project Manager / Webmaster – September 2014 through December 2016 – IEEE Stony Brook Chapter – Stony Brook, NY
- *Maintain the IEEE website based on Wordpress*
- *Manage IEEE-run projects through the running of weekly project hours and the foundation and administration of an official chapter GitHub account*
- *Integrate search engine optimization into all pages*