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BRANDT NEWTON

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EDUCATION

Burlington, VT **University of Vermont** **Fall 2012 – May 2016**

- B.S. in Computer Science with Minor in Mathematics.
- Coursework: Databases; Artificial Intelligence; Operating Systems; Mobile Apps and Embedded Devices; Human Computer Algorithms; Interaction; Computer Architecture; Calculus III; Linear Algebra

RELEVANT EXPERIENCE

Software Engineer, Intern **Mach7 Technologies** **Started May 2015 (Current)**

- Redesigned Rapid Migration Utility (RMU) as a scalable Windows Service.
- Created an ASP.NET web application for monitoring, configuring and controlling the RMU.
- Designed Migration component framework and SDK to simplify creation of customer specific components.
- Improved legacy RMU code efficiency: designed a tree-like filesystem data structure where each level is lazy-loaded as a singly-linked list for minimal space usage and efficient search times during depth-first searches.

Teaching Assistant **University of Vermont** **Fall 2014 – Spring 2015**

- Courses: Intermediate Programming: Java & Intro to Programming: Python
- Conducted weekly labs & graded homework

TECHNICAL EXPERIENCE

Conceived, Designed & Programmed by me

- **Rational; Diet App for Android.** Created an app that makes food recommendations based on machine learning algorithms, provides flexible nutrient tracking, expert system diet creation and remote diet coaching. Releasing January 2015. Java, SQLite, PHP, MySQL, Google Analytics, Google AdMob.
- **Builder; Custom Computer Website**. Created a social website for comparing custom computer builds. PHP, MySQL, JavaScript.
- **Rep Check; Android Exercise App**. A one-rep-max calculator with exercise recording. Java, SQLite, Google Analytics.

School Projects

- **ASL Sign Language Tutor.** Human Computer Interaction: created a teaching program that interprets user hand data from a Leap Motion device using a KNN algorithm. Assigned in Python but ported to Java for cleaner object oriented code.
- **Expert System for Medical Diagnosis.** Artificial Intelligence: created a CLIPS expert system that can diagnose 1 of 6 diseases by strategically asking user a series of questions.

ADDITIONAL EXPERIENCE AND AWARDS

- **Best Java Project, 2013 UVM CS Fair**. Won best Java project for 2D game, out of 22 projects.
- **Best Website, 2014 UVM CS Fair**. Won best website for Builder, a custom computer ranking and social site, out of 59 projects. PHP, MySQL, JavaScript.
- **2nd Place: Advanced Projects, 2015 UVM CS Fair.** Placed 2nd in the Advanced category for Rational.
- **Afterhof.com, Community Service project**. Advice website, with content management system, for excommunicated religious group members. PHP, MySQL, JavaScript.
- **Presented at Vermont Code Camp 7.** Presented “Making Windows Services User Friendly” at the 2015 Vermont Code Camp.
- **Physics Teacher, Kenya**. Created & taught high school Physics & Algebra lessons in rural Emwiru, Kenya while staying with host families.

LANGUAGES AND TECHNOLOGIES

- Java; C#; SQL (SQL, SQLite & MySQL); Python; PHP; JavaScript
- Git; Android; Visual Studio; TFS; IntelliJ; Unix/Linux; Windows