Nathan Lilienthal

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Education

- **Northeastern University** **Boston, MA**
  College of Computer and Information Science *2011 – 2016*
  Bachelor of Science in Computer Science
  - Relevant Courses Taken: Programming Languages, Systems and Networks, Artificial Intelligence, Theory of Computation, Object Oriented Design, Computer Organization, Fundamentals of Computer Science 1 & 2, Logic and Computation, Algorithms and Data Structures, Special Topics in Programming Languages, Software Development (aka HELL), Compilers, Combinatorics.
  - Courses TA'd: Fundamentals of Computer Science 1.

Languages: Ruby, C/C++, Rust, LUA, and Racket. Java, JavaScript, Python, and Shell and many more...
Systems: Git, GitHub, Postgres, Rails, UNIX, AVR/Arduino, Linux, WoW (ask me about it).

Experience

- **Americas Test Kitchen** **Boston, MA**
  Web Developer *Jan. 2014 – June 2014*
  - Pushed code to the frontend and backend for all four of Americas Test Kitchen's websites. Fixed bugs and upgraded technical infrastructure.
  - Built modularized components to abstract functionality found common throughout the companies codebase.
- **Bluesocket - Adtran** **Burlington, MA**
  Software Developer *Jan. 2013 – June 2013*
  - Developed an automated build system which allowed developers to see how their changes would affect a real build of the system. Made turnaround time on changes faster, and allowed everyone to run a build.
  - Fixed user reported issues in Ruby/Rails and LUA. Including hardening validations, and updating database migrations for old versions of the software.
  - Designed a class/model structure for users and accesspoints which allowed the back-end to represent clients of individual accesspoints.
- **Northeastern University CCIS** **Boston, MA**
  TA for Fundamentals of Computer Science 1 *Fall 2012, Fall 2013, Fall 2014*
  - Taught labs for the class by giving mini lectures and monitoring the class progress, helping students with questions, and teaching concepts in new ways.
  - Held office hours to further help students with the course.
- **Homer Energy** **Boulder, CO**
  Software Developer, Summer Intern *Summer 2012*
  - Developed an internal tool to view the Google Protocol Buffer used to pass values between all parts of the application. This allowed developers to quickly see what the values of program inputs and outputs were.
  - Began a web based front-end for HOMER in Rails. This was the starting point for the basic edition of HOMER, and provided a proof of concept for how to integrate the HOMER API with a webserver.

Current Projects

- **Multi2Sim** **Research Project with Professor**
  Southern Islands Compiler Backend *2014 – Current*
  - Structuring and implementing the C++ classes needed to represent the notion of a compiler pass, along with the data unique to each pass.
  - Designed an algorithm for an important pass which optimizes valuable register use specific to GPUs. This algorithm moves variable storage into common registers across units executing in parallel, when possible.
- **Quadcopter** **3 Involved People**
  Autonomus / Remote Controled Arial Drone *2013 – Current*
  - RC electronics, including 3-phase brushless motors, electronic speed controllers, and LiPo batteries.
  - Dug deeper into microelectronics circuits, connecting motors, and sensors to the self-made control board.
  - Interfaced with registers and hardware interrupts to get needed sensory data from the sensors on the control board.

Interests: Microelectronics, Espresso, Skiing, Woodworking (aspiring), Computer Architecture, Teaching

source code @ github.com/nixpulvis/resume