Web: connorbrem.com
Projects: github.com/cbrem

Connor Brem

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Education

Carnegie Mellon University – B.S. Computer Science (May 2015)
GPA: **3.93 / 4.0**
Selected Coursework:
Compiler Design, Distributed Systems, Embedded Systems, Computer Security, Machine Learning, Programming Languages, Mobile Web Apps

Work

Google – Software Engineering Intern (Summer 2013)
Designed, implemented, and launched new internal APIs and documentation for a major Google publisher-subscriber system. This system is used by Chrome, Google+, and Google Drive. The new APIs, written in **JavaScript** and **Google's Closure Library**, significantly increased the system's ease of adoption.

Mozilla – Software Engineering Intern (Summer 2014)
Designed and implemented APIs for Firefox's Add-on SDK. Made a number of other contributions to Firefox's developer tools. Worked in **Javascript**.

Carnegie Mellon University – 15-112 Course Assistant (Fall 2012 - Fall 2014)
Taught and mentored novice programmers in Carnegie Mellon's most difficult introductory computer science course, which uses **Python**. I taught recitations for 30 students, held tutoring and review sessions for many more, and guided the development of term projects.

Projects

Online Curriculum (Fall 2014)
Developing and rigorously evaluating an online curriculum for novice programmers. Computer Science students at Carnegie Mellon University will use this curriculum to rapidly gain proficiency in C0, a C-like language, before beginning classes.

ByteTorrent (Spring 2014)
Designed a BitTorrent-like peer-to-peer protocol. Implemented a client and server for this protocol in **Go**. Used Paxos on the server for replication and checksums on the client for file integrity checking. Available at github.com/cbrem/bytetorrent.

OuRTOS (Spring 2014)
Used **C** and **assembly** to create an embedded real-time operating system. Implemented a **preemptive scheduler** for multitasking. Included a **mutex library**, which used priority ceiling to avoid deadlock. Available at github.com/cbrem/ourtos.

Educational Game Creation Framework (Spring 2013)
Used **JavaScript** and **HTML5 Canvas** to implement an interface for creating games which teach English as a second language. Donated the interface to **TechCaFE**, a non-profit which will deploy it around the world.

Skills

Languages: Java, C, Go, JavaScript, Python, Haskell, SML, Matlab, SystemVerilog, CSS, HTML
Tools: Git, LaTeX

Awards

Dean's List (Fall 2011 - Spring 2014)
First Penguin Award: *Build18* Computer Engineering Hack-Week (Spring 2013)
Frank-Ratchye STUDIO for Creative Inquiry Award: *Meeting of the Minds* Expo (Spring 2013)
Yahoo! Undergraduate Research Award: *Meeting of the Minds* Expo (Spring 2014)