MACK DUAN

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☰ SKILLS

Languages

| C | C++ | C# | Java | PHP | Python | Erlang | Ruby on Rails | HTML | CSS | JavaScript |

Frameworks

| Flask | Node.js | Sass | Bootstrap | jQuery | Backbone | React.js | Require.js | PhantomJS | MongoDB | mongoengine | Redis |

| MySQL | Hadoop | ASP.NET |

Tools

| Windows | Mac OS X | Ubuntu | Git | SVN | Vim | Visual Studio | Eclipse | Zsh |

💼 WORK EXPERIENCE

Microsoft

- Analyzed video memory allocations in Windows to enhance performance
- Built new tools to visualize video memory usage from both application/OS-centric perspectives

Software Engineer
Sep 2013 — Dec 2013

Mozilla

- Worked in Mozilla Labs team on PDF.js, PDF viewer in Firefox written in JavaScript ⊠
- Proposed and implemented performance enhancements, improving loading time by an order of magnitude
- Added support for PDF annotations

Web App Developer
Jan 2013 — Apr 2013

Wish.com

- Implemented user-facing features of Wish
- Set up and managed build system
- Got exposure to and worked on entire web-stack, gaining experience with many technologies used at startups

Web Developer
May 2012 — Aug 2012

Facebook

- Proposed and implemented changes to gather location data from photos leading to a 5X increase in location data, and causing controversy on Reddit and Hacker News ⊠
- Built infrastructure to process and analyze gathered location data
- Built features to expose new location data to users

Software Engineer
Sep 2011 — Dec 2011

University of Waterloo

- Built search engine interface on top of Google and Bing to be used in research experiments

Research Assistant ⊠
May 2011 — Aug 2011

Facebook

- Built system to support load balancing on Facebook's chat servers, significantly reducing

Software Engineer

number of needed servers — Jan 2011 — Apr 2011

- Ran simulations to stress-test load balancing system

Xtreme Labs

Mobile Developer
May 2010 — Aug 2010

- Developed and maintained several BlackBerry applications for various clients
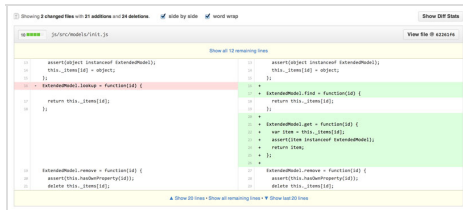- Maintained websites for various clients
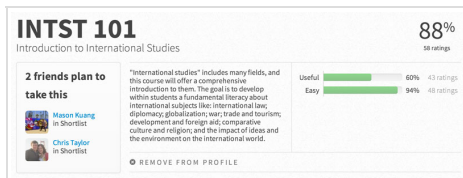
⚗ PROJECTS

Github Side-by-Side Diffs ⌯

Nov 2013

- Built a Chrome extension that allows improves GitHub's diff viewer
- Supports viewing diffs side-by-side
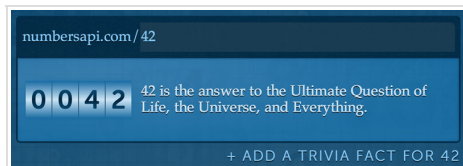- Supports showing more context around changes

UW Flow ⌯

Aug 2012 — Present

- Helping build a service that allows University of Waterloo students see course reviews and ratings
- Currently has over 4000 users and 40000 ratings

Numbers API ⌯

Apr 2011

- Helped build a service for other hackers that gets 20,000 requests per day
- Made the front page of Hacker News ⌯

JobMine Improved

Jul 2010

- Built a service to provide a more user-friendly interface of searching for jobs on University of Waterloo's job board

Discussion Forum

Sept 2009 — Dec 2009

- Built discussion forum for University of Waterloo's IEEE branch

📖 EDUCATION

Bachelor of Software Engineering — University of Waterloo

Nov 2013 — Present

- Cumulative average of 92.0% ⌯

🏆 AWARDS AND ACCOMPLISHMENTS

- **Dean's Honours List** — University of Waterloo — Sep 2009 — Present
- **President's Scholarship of Distinction** — University of Waterloo — Sep 2009
- **Second highest average in school district** ⌯ — Ottawa-Carleton District School Board — July 2009