MACK DUAN

🌐 mduan.com   ✉ mack@mduan.com   github.com/mduan

▤ SKILLS

Languages HTML5 CSS3 JavaScript Python C++ C C# Scala PHP MySQL

Frameworks Backbone.js React.js Meteor Webpack Bootstrap Semantic UI IndexedDB Sass Less

Django Flask MongoDB mongoengine Redis Flight.js Leaflet.js mustache Node.js

Require.js PhantomJS Hive

Tools Windows Mac OS X Ubuntu AWS Git Vim Visual Studio IntelliJ Zsh

💼 WORK EXPERIENCE

Robinhood • *Software Engineer – Web*   Dec 2015 — Apr 2016
- Built Chinese version of Robinhood website (https://www.luobinxia.com)
- Built signup flow for referral program (https://robinhood.com/referral/mackd/)
- Added infrastructure for Webpack and React.js
- Skills: HTML5, CSS3, JavaScript, Django, Webpack, React.js

Twitter • *Software Engineer – Web Client*   Jul 2014 — Dec 2015
- Built the redesign of Twitter search UI
- Built component for showing user recommendations in the home timeline
- Built component for showing related tweets on permalink pages
- Built custom search experience for NFL Superbowl
- Skills: Scala, HTML5, CSS3, JavaScript, Flight.js, mustache

Microsoft • *Software Engineer Intern – Windows Performance*   Sep 2013 — Dec 2013
- Analyzed video memory allocations in Windows to enhance performance
- Built new tools to visualize video memory usage from both application/OS-centric perspectives
- Skills: C, C++, C#

Mozilla • *Software Engineeer Intern – Mozilla Labs*   Jan 2013 — Apr 2013
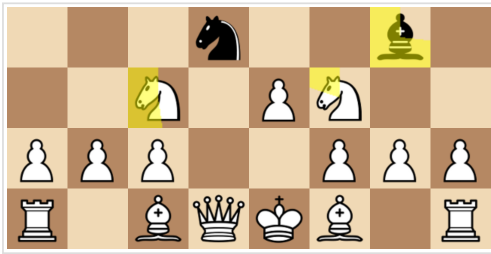- Worked on PDF.js, open-source PDF viewer in Firefox written in JavaScript
- Proposed and implemented performance enhancements, improving loading time by an order of magnitude (https://air.mozilla.org/intern-pdfjs/)
- Added support for PDF annotations
- Github: https://github.com/mozilla/pdf.js/commits?author=mduan
- Skills: HTML5, CSS3, JavaScript

Facebook • *Software Engineer Intern – Location Tagging*   Sep 2011 — Dec 2011
- 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 (https://news.ycombinator.com/item?id=3377018)
- Built infrastructure to process and analyze gathered location data
- Built features to expose new location data to users
- Skills: HTML5, CSS3, JavaScript, PHP, MySQL, Hive

🔬 Side Projects

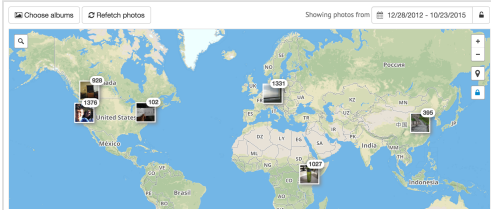**Real-time Chess (http://rts-chess.mduan.com)** — Dec 2015 — Apr 2016

- Built real-time (i.e. not turn-based) variant of chess
- Supports playing computer with various difficulty levels
- Supports playing people over the internet
- Used heuristics to deal with latency and synchronization issues
- Github: https://github.com/mduan/rts-chess
- Skills: HTML5, CSS3, JavaScript, Meteor, Semantic UI, Less

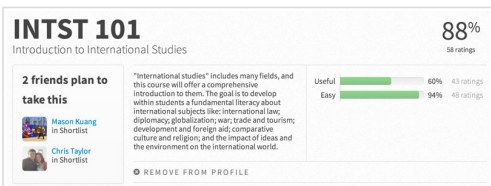**Photo Map (http://mduan.com/photos.html)** — Oct 2015

- Built web app for fetching my geo-tagged Google Photos and showing them on a map
- Various filters such as by album, time range, and location
- Github: https://github.com/mduan/mduan.com/compare/bf81aa1...00daf31
- Skills: HTML5, CSS3, JavaScript, Leaflet.js, IndexedDB, Bootstrap

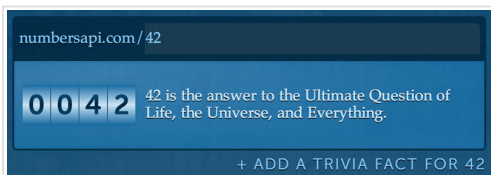**UW Flow (https://uwflow.com/demo)** — Aug 2012 — Apr 2014

- Co-founded a website that lets university students review and plan courses
- Currently has 9,000 users, 80,000 ratings, and 400,000 course searches
- Github: https://github.com/UWFlow/rmc/commits?author=mduan
- Skills: Sass, Bootstrap, Require.js, Backbone.js, PhantomJS, Python, Flask, MongoDB, mongoengine, Redis

Numbers API (http://numbersapi.com) — Apr 2012

- Built an API for getting interesting number facts that gets 20,000 requests per day
- Made the front page of Hacker News (https://news.ycombinator.com/item?id=3667469)
- Github: https://github.com/mduan/numbers_api/commits?author=mduan
- Skills: Bootstrap, Require.js, Node.js

📘 Education

Bachelor of Software Engineering • University of Waterloo — Sep 2009 — Apr 2014

- Cumulative average of 92.0%

🏆 Awards and Accomplishments

With Distinction – Dean's Honours List • University of Waterloo — Sep 2009 — Apr 2014

President's Scholarship of Distinction • University of Waterloo — Sep 2009

Second highest average in school district – 98.8% • Ottawa-Carleton District School Board — Jul 2009

Last updated April 28th, 2016