

# Darren Cao

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## TECHNICAL SKILLS

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**Languages:** C/C++, Java, C#, Ruby, Python, JavaScript, HTML, CSS, SQL    **Tools:** git, bash, vim, IDEs  
**Frameworks:** Ruby on Rails, React, NuclearJS (Flux), .NET, AngularJS, jQuery, Bootstrap, Android

## EDUCATION

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**University of Waterloo** – Bachelor of Software Engineering *Sep 2013 – present (class of 2018)*  
- Cumulative Average: 87% (**3.9/4.0** GPA) – **Top 10** rank in class, Dean's Honors List

## EXPERIENCE

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**Riviera Partners** – Full-Stack Developer (Ruby on Rails, React) *San Francisco, CA (May 2016 – Aug 2016)*  
- Unified external mailboxes with the matching platform, allowing recruiter emails to be associated with candidate and client applications for centralized applicant details, conversation history, and reach-outs  
- Added employment wins feature used on all profiles to evaluate achievements based on company success  
- Rewrote notifications handling architecture to enable different user roles to manage their preferences  
- Fixed issues with Elasticsearch indexing and Sidekiq job processing, increasing reliability and scalability  
- Improved agile and coding practices by setting up seeded development environments and RSpec unit tests

**DBRS Limited** – Full-Stack Developer (C#, AngularJS) *Toronto, ON (Sep 2015 – Dec 2015)*  
- Built the rating checklist workflow used by all analysts to ensure compliance with each regulatory step  
- Designed analytics dashboard for tracking methodologies, powering insight into effective credit analysis

**Ultimate Software** – Applications Developer (JavaScript, HTML, CSS) *Weston, FL (Jan 2015 – Apr 2015)*  
- Created an interactive page-scraper enabling non-technical users to generate Selenium code; released internally to the testing team and managed hotfixes, support, and successful iterations based on feedback

**Toronto Hydro** – Systems Engineer *Toronto, ON (May 2014 – Aug 2014)*  
- Constructed an automated report builder through SQL querying and spreadsheet parsing

## PROJECTS

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**Snapfilters** – C++, OpenCV, OpenGL *<https://github.com/dcaoyz/snapfilters>*  
- Researched and implemented Snapchat-like filters using computer vision and graphics libraries in C++  
- Created effect overlays by generating a face mesh through Haar Cascades and applying textures on top  
- Tracked gestures using expression classifiers to trigger filters on customized events

**ICUbot** – C#, Node.js *<https://github.com/ICUbot>*  
- Built an interactive surveillance robot that chases intruders; **\$5k Microsoft Prize Winner** at HackPrinceton  
- Implemented pathfinding algorithms using sensor data, and integrated social media for sharing live images

**Jane Street: Algorithmic Trading Competition** – Java *<https://github.com/dcaoyz/janestreetetc>*  
- Designed adaptive, real-time algorithms applying arbitrage strategies in a market simulator; placed **Top 8**

**MNIST Reader** – Python *<https://github.com/dcaoyz/mnistreader>*  
- Applied machine learning techniques to classify a computer vision dataset of handwritten numbers