

# Yuchong Pan

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## EDUCATION

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- **University of British Columbia** Vancouver, BC  
*B.Sc., Combined Honours Computer Science and Mathematics* September 2017 – May 2021
  - **Overall Grade Average:** 94%
  - **Coursework:** Combinatorial Optimization\*, Submodular Optimization\*, Tools for Modern Algorithm Analysis\*, Applications of Linear Algebra in TCS\*, Probability\*, Stochastic Processes\*, Complexity Theory\*, Real Analysis\*

\*graduate courses

## SELECTED EMPLOYMENT

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- **Microsoft** Vancouver, BC  
*Software Engineer Intern* May 2020 – August 2020
  - **.NET Runtime IL Interpreter:** Resurrected the IL (intermediate language) interpreter inside .NET Runtime. Conducted performance analyses for the various configurations of the IL interpreter. [GitHub] [Presentation]
- **Microsoft** Redmond, WA  
*Software Engineer Intern* June 2019 – August 2019
  - **.NET Core Uninstall Tool:** A guided tool that enables the controlled clean-up of a system such that only the desired versions of .NET Core SDKs and Runtimes remain. [GitHub] [Blog] [Documentation]
  - **MSBuild Binary Log Query Language:** A domain-specific language extending XPath (XML Path Language) that provides multiple search operators for advanced queries on the target graph parsed from MSBuild binary logs.
- **Microsoft** Vancouver, BC  
*Software Engineer Intern* May 2018 – August 2018
  - **Earth Lens:** An open-source project for iPad that identifies, tracks, and analyzes objects in aerial imagery to assist in disaster relief and environmental conservation. The project uses Xamarin and CoreML. [GitHub] [Blog]
- **Sogou** Beijing, China  
*Software Engineer Intern* May 2017 – July 2017
  - **Speech-Recognition & OCR Proofreading Tools:** Web apps for internal proofreading and testing of AI-Cloud speech recognition and OCR services; based on Bootstrap, Vue.js, Flask and Docker.
  - **Receipt Recognition Service:** A service for receipt format and content recognition; based on Flask, scikit-image and Sogou AI-Cloud OCR Service; used for reimbursement management of Sogou's financial department.

## SELECTED PROJECTS

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- **THE Hack:** The largest hackathon in China with 500 participants, 2,000 applicants from over 400 schools and 8 countries; served as Co-Founder, Director of Technology, and Co-Director of Corporate Relations. [Website]
- **Gradual Octave:** Extended the Octave programming language with a gradual type system, incorporating benefits of both static and dynamic type systems. [Report] [GitHub]
- **MiniJava Compiler:** MiniJava is a subset of the Java language. Implemented a MiniJava-to-x64 compiler, including phases of frontend, intermediate representation, code generation, and optimization.

## SELECTED AWARDS

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- **Stanley M Grant Scholarship in Mathematics, University of British Columbia** 2019, 2021
- **Faculty of Science International Student Scholarship, University of British Columbia** 2018, 2019, 2020
- **Trek Excellence Scholarship, University of British Columbia** 2018, 2019, 2020
- **Science Scholar / Dean's Honour List, University of British Columbia** 2018, 2019, 2020
- **11th Place, ACM International Collegiate Programming Contest Pacific NW Region** 2017
- **Outstanding International Student Award, University of British Columbia** 2017
- **Silver Medal, China Team Selection Competition for International Olympiad in Informatics** 2015
- **Bronze Medal, Asia Pacific Informatics Olympiad** 2015
- **First Prize, National Olympiad in Informatics in Provinces** 2013, 2014

## PROGRAMMING SKILLS

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- **Languages:** C++, Python, Java, C#, Racket, Standard ML, Ruby, MATLAB, Go, JavaScript, MySQL, L<sup>A</sup>T<sub>E</sub>X
- **Technologies:** Django, Flask, Tornado, Microservices, Bootstrap, Vue.js, AngularJS, D3.js, Node.js, Marko.js, Ionic, Nginx, Redis, Docker, Amazon AWS, Microsoft Azure, .NET, Xamarin, Microsoft Build Engine (MSBuild)