

Dan (Shi Jie) Tan

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<https://github.com/dantan123>

EDUCATION

University of Waterloo (Waterloo, CA)

2015 – 2020

Civil Engineering, Honours BAsC

- **Courses:** Databases & Software Design, Systems Programming & Concurrency, Algo & Data Structures, Pattern Recognition & AI, Project Management, Engineering Economics, Physical Distribution & Logistics

University of Leeds (Leeds, UK)

January – June 2019

- **Computational Fluid Dynamics Project:** Investigated the effects of fluid flow and heat transfer in microchannels through the finite volume method

TECHNICAL SKILLS

- **Languages:** C++, C, Fortran, Python, R, MATLAB, SQL, HTML, CSS, Ruby
- **Frameworks and Libraries:** Rails, Bootstrap, TensorFlow
- **Tools:** Git, Shell, ANSYS Fluent, AutoCAD

EXPERIENCE

Research Assistant – Hydrologic Model Development & Analysis

Water Institute, Waterloo

April – August 2018

- Collaborated with researchers at the University of Saskatchewan developing and testing the infiltration modules of the hydrologic model – MESH through Fortran
- Conducted time series analysis of hydrologic model data by deploying regression and dynamic time warping for hydrologic model calibration through R
- Demonstrated research potentials by conducting literature reviews of interflow and infiltration algorithms and flood forecasting methodology (intensity-duration-frequency curves)
- Presented research summary of the numerical model analysis at the 2018 Canadian Geophysical Union Conference (CGU) in Niagara Falls

Technical Intern

Simpson Gumpertz & Heger (ENR 500 Consulting), San Francisco

September – December 2019

- Developed and presented visual contents including decision trees and flowcharts for waterproofing design based on engineering documentation and specifications
- Successfully revised architectural designs per building physics practice (heat, ventilation, air infiltration)
- Displayed effective communication and organizational abilities by assisting with technical reports and enclosure inspections/investigations
- Demonstrated attention to detail by verifying submittals based on shop drawing and data sheet reviews

Project Coordinator

EllisDon - Ottawa Light Rail Transit Project, Ottawa

September – December 2017

- Performed scheduling through Gantt charts and the critical path method for minimizing project delays
- Verified contracts for project submittals and conducted quantity takeoff (estimating) for cost control
- Utilized Oracle's Primavera software for tracking project progress and responding to RFIs, invoices and punch lists

Structural Modelling Intern
HongRun Group Co. Ltd, Shanghai

January – April 2017

- Demonstrated analytical abilities by conducting dynamic & static modelling of structures using proprietary software and evaluating the model output
- Drafted structural details per specifications through AutoCAD

ACHIEVEMENTS & ACTIVITIES -----

- **Hult Prize Waterloo Finalist - Craft Collective:** Created a viable business model based on research and customer analysis of women in developing countries
 - **Reference:** <https://uwaterloo.ca/conrad-school-entrepreneurship-business/news/student-entrepreneurs-pitch-solutions-youth-unemployment>
- **Podcast Team @ Engineers Without Borders UW Chapter:** Co-produced sustainability-themed podcasts from a systems-thinking perspective, aiming to increase awareness on campus
 - **Reference:** <https://anchor.fm/uwaterlooewb/>
- **UW Varsity Athlete - Tennis:**
 - **Reference:** <https://athletics.uwaterloo.ca/sports/mens-tennis/roster/2018-19>
- **Teaching & Volunteering:**
 - Certified Tennis Canada Instructor
 - Stepping Stones China English Teacher: teaching migrant children in China
 - Daedalos Academy Camp Assistant: tutoring LEGO robotics to primary school children
 - Emmaus Leeds (UK): charity hitchhiking from UK to Germany
- **Campus Sustainability Initiative:** Campus Compost Operator