

Dan Tan

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EDUCATION

Bachelor of Applied Science, Civil Engineering (BASc)

University of Waterloo – Waterloo, Canada

Sep 2015 – Oct 2020

Engineering Exchange

University of Leeds – Leeds, United Kingdom

Jan – Jun 2019

Relevant Courses: Algorithms & Data Structures, Databases & Software Design, Pattern Recognition, Artificial Intelligence, Systems Programming & Concurrency, Numerical Computation, Optimization

EXPERIENCE

Software Development (Projects)

Jan 2020 – Present

- Designed relational schemas and set up databases for data migration and querying
- Configured custom RESTful routes and designed intuitive single-page user interfaces
- Adopted test-driven development by writing unit, integration, and end-to-end tests
- Implemented multi-threaded and asynchronous programs and interpreted memory and synchronization errors
- Wrote AI algorithms and built ML and deep learning models for classification applications
- Experienced with PostgreSQL, Ruby on Rails, JavaScript, React, Figma, Python, TensorFlow, and C

Research Assistant

Apr – Aug 2018

Water Institute, Waterloo

- Optimized and debugged soil infiltration algorithms for a surface-water hydrology model
- Wrangled and analysed hydrologic time-series data through the dynamic time warping technique
- Utilized the CLI for running file systems, automated tests, and software version control
- Presented research summary at the Canadian Geophysical Union conference to a group of 30+ researchers

Consulting Intern

Sep – Dec 2019

Simpson Gumpertz & Heger, San Francisco

- Designed flowcharts and decision trees by parsing design standards, codes, and specifications for clients
- Investigated engineering design failures through forensic testing for litigation support
- Revised building enclosure design drawings using CAD and Bluebeam Revu, lengthening the enclosure life cycle and enhancing the overall energy efficiency

Student Entrepreneur

Sep – Dec 2018

Craft Collective – Hult Prize Finalist, Waterloo

- Ideated a handicraft e-commerce solution and prototyped a mock-up for empowering youth and local handicraft cooperatives in developing countries
- Conducted handicraft market research by analysing sociodemographic reports and surveying 22 collectives

Podcast Co-host

May – Aug 2018

UW EWB – Ideas Without Borders, Waterloo

- Advocated systems-thinking to university students covering topics such as feedback loops and big data

Project Coordinator

Sep – Dec 2017

EllisDon, Ottawa

- Coordinated project activities by interfacing with stakeholders and engineers in a 200+ people teams
- Wrote progress memos and reports, updated Gantt charts, and responded to RFIs and change orders
- Estimated and verified project budgets using MS Excel for cost control, reducing the closure phase