Dan Tan

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TECHNICAL SKILLS

- Languages: PostgreSQL, Python, Ruby, JavaScript, HTML, CSS, C, C++, MATLAB, R
- Frameworks & Libraries: React, Rails, Jest, Puppeteer, Material-UI, Chart.js, Bootstrap, TensorFlow
- Tools: Git, Figma, AutoCAD, Ansys Fluent

EXPERIENCE

Software Development   Jan 2020 – Present
- Designed relational schemas, set up databases for migration and querying, and configured custom RESTful routes
- Built single-page user interfaces through React Routers and consumed map and weather APIs for fetching data
- Adopted test-driven development by writing unit, integration, and end-to-end tests with Jest and Puppeteer
- Implemented asynchronous programs and interpreted memory and synchronization errors through Valgrind
- Built ML and deep learning models for image classification and NLP using TensorFlow, Scikit-learn, and NLTK

Projects:
- Developed a sustainability-themed React application that showcases the green city features and weather forecast
- Built a Dungeons & Dragons manager using Ruby on Rails and Postgres for creating custom spell books
- Wrote a crossword puzzle solver in Python that performs backtracking search and heuristics to play optimally

Research Assistant   Apr – Aug 2018
Water Institute, Waterloo
- Optimized and implemented soil infiltration algorithms for a surface-water hydrology model
- Wrangled and analysed hydrologic time-series data through R for measuring model predictions
- Utilized the CLI for running file systems, automated tests, and software version control in Windows
- Presented research summary at the Canadian Geophysical Union conference to 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 and analysis for litigation support
- Revised building enclosure design drawings through CAD, enhancing the enclosure durability and energy efficiency

Student Entrepreneur   Sep – Dec 2018
Craft Collective – Hult Prize Finalist, Waterloo
- Ideated youth unemployment solutions, defined user personas, and presented a wireframe design
- Iterated an e-commerce business model for connecting local handicraft cooperatives to global customers
- Researched the handicraft market by surveying 22 handicraft collectives and analysing sociodemographic reports

EDUCATION

Bachelor of Applied Science, Civil Engineering (BASc)   Sep 2015 – Oct 2020
University of Waterloo – Waterloo, Canada
- Advocated systems-thinking to university students through podcasts at UW EWB's Ideas Without Borders
- *Topics:* Big Data, Feedback Loops, Biases & Heuristics, Sustainable Transportation, Healthy Food, etc.

Engineering Exchange   Jan – Jun 2019
University of Leeds – Leeds, United Kingdom
- Facilitated cross-cultural learnings among international students through local charity events and trips

Relevant Courses: Databases & Software Design, Algorithms & Data Structures, Pattern Recognition, Artificial Intelligence, Systems Programming & Concurrency, Optimization, Project Management, Supply Chain & Logistics