Dan Tan

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TECHNICAL SKILLS

- Languages: SQL, Python, Ruby, JavaScript, HTML, CSS, C, C++, MATLAB, R
- Frameworks & Libraries: React.js, Express, Rails, Jest, Chart.js, Material-UI, Bootstrap, TensorFlow
- Databases & Tools: PostgreSQL, MongoDB, MS Excel, Git, Figma, AutoCAD

EXPERIENCE

Software Developer (In Training)   Apr 2020 – Present
- Built backend applications using MVC frameworks and implemented relational and document-oriented databases
- Wrote and consumed REST API endpoints in Express and React for data fetching and user authentication
- Designed object-oriented SPAs through React Routers and structured components using Context and Hooks
- Adopted test-driven development by writing unit and integration tests in Jest and RSpec
- Created asynchronous network programs and interpreted memory and synchronization errors

Research Assistant   Apr – Aug 2018
Water Institute, Waterloo
- Implemented algorithms and subroutines for a hydrology model used by Environment & Climate Change Canada
- Wrangled and analysed hydrologic time-series data by sequence matching to measure model predictions
- Utilized the command line interface for managing file systems and software version control in Windows
- Presented research results at the Canadian Geophysical Union Conference to researchers and experts

Consulting Intern   Sep – Dec 2019
Simpson Gumpertz & Heger, San Francisco
- Evaluated design alternatives based on key criteria and metrics and wrote client proposals and recommendations, in collaboration with the department head
- Created design workflow visualizations (flowcharts, decision trees) by parsing documentation and specifications

Student Entrepreneur   Sep – Dec 2018
Craft Collective – Hult Prize Finalist, Waterloo
- Engaged in UX design by ideating feasible solutions, defining user personas, and presenting wireframe designs
- Researched the handicraft market by surveying 22 existing cooperatives and analysing sociodemographic reports

PROJECTS

- Wrote an asynchronous web crawler with libcurl for searching and downloading PNG URLs from a server
- Developed a React application that maps sustainable city features and displays real-time weather forecast
- Built a D&D manager in Ruby on Rails and PostgreSQL for creating customized book contents
- Architected a convolutional neural network in TensorFlow that identifies traffic signs with 97% accuracy

EDUCATION

Bachelor of Applied Science, Civil Engineering (BASc)   2015 – 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, 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, Numerical Computation, Optimization, Project Management, etc.