

Amar S. Gill

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OBJECTIVE

Determined engineer with a background in building sciences and construction.
Looking to apply development skills at a purpose driven organization.

ENGINEERING EXPERIENCE

Product Development Services for NaturaSeal Performance Coatings Ltd.

Morrison Hershfield Ltd., Burlington ON. (March 2017-June 2019)

Accelerated market adoption of a new entrant into the building membranes market by advising the manufacturer of the minimum necessary technical details and standardized testing reports to provide contractors and regulators for product approval on new construction sites. Drafted the required details and maintained an active file on behalf of client.

Developed a quality assurance programme with quality assurance forms to be filled out on site allowing the manufacturer to provide 10 and 20 year long warranties to building owners and operators.

Domestic Water Piping Upgrade at Darlington Nuclear Generating Station

Ontario Power Generation, Oshawa ON. (June 2014-July 2015)

Planned and monitored the event free execution of a domestic water outage at Darlington Nuclear Generating Station to facilitate piping upgrades as part of their Nuclear Refurbishment Programme. Actively liaised with plant staff and contractor to maintain project schedule and remain within budget (\$3M).

PERSONAL PROJECTS

Learning Quest [Svelte, Sapper, Firebase, Firestore] [\[Source\]](#) [\[Visit\]](#)

- Interactive education tool for young children
- Implemented Firebase authentication and Firestore NoSQL database to save user progress

Array Methods Visualizer [Svelte] [\[Source\]](#) [\[Visit\]](#)

- Single page application where users can visualize various sorting methods applied on a randomized array

Hack Computer and Assembler [HDL, Assembler, Python] [\[Source\]](#)

- Used hardware description language to design and code every chip in a new 16-bit general purpose computer (e.g. CPU, ALU, RAM, ROM)
- Wrote an assembler in Python to translate assembly language programs as per the given machine language specification

Leet Quiz [Flutter, Firebase, Firestore] [\[Source\]](#) [\[Visit\]](#)

- A mobile quiz game available on Android and iOS
- Implemented a Firestore NoSQL database to save user progress and Firebase authentication for Google and Apple accounts

Habit Wars [Flask, PostgreSQL, AWS S3, RabbitMQ, Heroku] [\[Source\]](#) [\[Visit\]](#)

- Gamified habit tracker web app with a competitive element
- Implemented chronological jobs using RabbitMQ to end active game rounds and start new rounds each week

EDUCATION

Hebrew University of Jerusalem

Nand to Tetris - part 1, Build a Modern Computer from First Principles - online via Coursera (2020)

NEXT Academy, Kuala Lumpur MY

Full Stack Web Development Bootcamp (2019)

Harvard University, Cambridge MA

CS50X Introduction to Computer Science and Computational Thinking - online via edX (2019)

McMaster University, Hamilton ON

Bachelor of Engineering, Civil - minor in Business Management (2016)

TECHNICAL SKILLS

JavaScript

- React, Jest, Node, Express, JQuery, Typescript, Svelte, Sapper

Python

- Flask, Anaconda3, Pytorch, iPython, Jupyter Notebook, Spyder, Kivy

Mobile Development

- Flutter, Dart

Low Level Programming

- Hardware Description Language, Assembler design, C language programming

Development Methodologies

- Test Driven Development, Mobile Responsiveness, RESTful APIs, Agile, RabbitMQ message brokering

Blockchain

- Solidity smart contracts, Truffle Suite, Web3, Metamask

Databases

- PostgreSQL, MongoDB, Cloud Firestore

Cloud Infrastructure

- Heroku, AWS S3, Firebase, Google Maps Platform

eCommerce

- Braintree, SendGrid