

# Taranvir Gill

Surrey, British Columbia  
778-680-2436 • taranvirg8@gmail.com

## Skills

- Programming languages: Python, C++, and VBA in Excel
- Soldering for electronic assembly
- Windows and Linux operating systems
- MATLAB programming
- FEA
- PLC programming
- SolidWorks CAD
- Tool use including wire strippers, crimpers, connectors, hand tools and electrical measurement equipment
- Bluebeam
- ASPEN Hysys
- PSS Sincal
- Revit
- Effective time management
- Detail oriented
- Problem solving
- Organized
- Customer service
- Bilingual: Punjabi and English

## Technical Projects

### **Transmission System Upgrade for 50 MW Solar Integration**

June 2025-August 2025

- Analyzed power flow and 56 contingency cases for a 37-bus system to integrate 50 MW solar PV
- Identified and resolved line overloads and voltage violations with and without solar operation
- Designed least-cost upgrades (new lines, transformer) based on cost/loss tradeoffs and reliability
- Modeled PV generator in PSS Sincal with voltage and reactive power limits

### **Capstone Project Team Lead**

September 2024-April 2025

- Conducted feasibility study for Solaris MCI and Renuwell on green hydrogen production from abandoned oil wells
- Managed conflicting team member schedules to organize regular meetings and meet deadlines using Gantt charts and work breakdown structures
- Drafted block (BFD) and process flow diagrams (PFD) using Bluebeam software
- Utilized HOMER Pro and ASPEN HYSYS softwares to simulate electrical and chemical processes
- Completed electrical schematics, equipment sizing and verified results using PSS Sincal

### **IESVE Building Energy Model**

January-April 2025

- Created a 3D model of a 10 story building using Revit
- Modelled then integrated HVAC systems into the model
- Applied the building envelope and performed thermal bridging calculations
- Made in compliance with British Columbia building codes

### **PLC Automated Conveyor Belt System**

February-April 2024

- Designed and implemented a ladder logic program to control a conveyor belt system with object detection and sorting functions
- Integrated sensors and actuators to automate object movement, start/stop operations, and rejection of defective items
- Utilized timers, counters, and interlocks to ensure safe and efficient operation of the process
- Tested and debugged the PLC program in simulation software to verify logical flow and reliability

# Taranvir Gill

Surrey, British Columbia  
778-680-2436 • taranvirg8@gmail.com

## Co-op Work Experience

### **Process Engineer**

May-August 2024

**Solaris MCI**, Surrey, British Columbia

- Drafted engineering drawings such as BFDs, PFDs and P&IDs using Bluebeam software
- Created Hydrogen process simulations using Aspen HYSYS
- Performed valving and vessel sizing and completed heat and material balance calculations
- Researched and ensured compliance with Hydrogen gas standards
- Assisted in the creation of Design Basis Memorandums (DBM) and other engineering documents for Hydrogen production facilities

### **Quality Assurance Engineer**

September 2022-March 2023

**Universal Douglas**, Burnaby, British Columbia

- Assembled and soldered printed circuit boards to test and analyze relay firing behavior
- Wired powerpacks, sensors and switches using crimping, wire cutting and shaving techniques
- Executed data analysis of relay sequences with code written in VBA excel
- Completed firmware updates and product assembly
- Conducted regression testing on new app updates ensuring functionality and stability
- Assembled electrical circuits to test the functionality and power outputs of products

## Education

**Simon Fraser University**, Surrey, British Columbia  
BASc Sustainable Energy Engineering

September 2019-August 2025

## Other Work Experience

### **E-comm Associate**

February 2020-September 2021

**Save-on-foods**, Surrey, British Columbia

- Provided excellent customer service by effectively communicating with and assisting customers
- Provided flexibility by effectively doing a multitude of different jobs around the store

### **Warehouse Associate**

Fall 2019, 2020, & 2021

**Dieleman Fundraising**, Surrey, British Columbia

- Demonstrated resilience by successfully completing demanding physical tasks
- Overcame organizational issues creating problem-solving skills

## Community Engagement

### **Food Distributor**

August 2019-Present

**Guru Nanak's Kitchen**, New Westminster, British Columbia

- Supporting vulnerable populations by supplying them with living essentials

## Interests

- Playing and watching sports, primarily basketball and football
- Learning about anthropology and history through literature and educational content