Chayanika **Awasthi**

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TECHNICAL SKILLS

Software Tools: SmartPlant Electrical, Power BI, Tableau, MATLAB, AutoCAD, Revit
Design & Analysis: Electrical design, load calculations, cost estimation
Programming: Python, JavaScript, HTML, CSS, SQL

EDUCATION

University of British Columbia **May 2025**
Bachelor of Applied Science – Electrical Engineering
Courses: Power System Analysis, Power System Optimization, Power System Protection

CERTIFICATION

Transforming the Grid: AI, Renewables, Storage, EVs, and Prosumers **Nov 2024**
Stanford Online

TECHNICAL WORK EXPERIENCE / PROJECTS

Engineering Technician II (Co-op), Fluor Corporation **May 2023 – Aug 2024**
- Developed electrical design criteria and specifications for HV and MV systems in compliance with **NERC, IEEE, and OSHA standards**
- Designed power and control cable layouts, motor control centers (MCCs), and switchgears
- Conducted load list calculations and collaborated on P&ID preparation using SmartPlant
- Coordinated technical and price evaluation bids with vendors, contributing to cost-effective project execution
- Facilitated the EGBC continuing education (CE) requirements by orchestrating department-wide townhall meeting and training sessions

Site-C Electrical Co-op, BC Hydro **Sep 2021 – Apr 2022**
- Assisted in design reviews for the Site-C Hydroelectric Dam, focusing on **automated control systems** and technical drawings
- Collaborated with contractors to provide **technical RFIs** and ensured proper implementation of design modifications
- Utilized Revit to maintain accurate configuration control of technical models
- Trained new co-ops on development process by mentoring and running training sessions

Capstone Project: Power Utility Renewable Energy Simulator (PURE-SIM) **Sep 2024 – Present**
- Leading energy feasibility studies for **run-of-the-river (RoR) hydroelectric generation** applications, focusing on renewable energy integration
- Developing and refining algorithms for estimating potential energy generation and lifecycle cost models
- Conducting cost analysis for RoR implementation, factoring in installation, maintenance, and environmental mitigation
- Enhancing the PURE-SIM tool to predict energy savings and optimize renewable energy usage at mining sites

ENGINEERING STUDENT TEAMS

Smart City, University of British Columbia **Sep 2024 – Present**

Energy Team Member

- Developing a predictive energy consumption app for UBC buildings by modeling usage data from lighting, HVAC, and other equipment
- Employing MATLAB for detailed modeling of energy consumption patterns, incorporating data-driven techniques to simulate and analyze usage over different timescales
- Utilizing time series analysis, regression modeling, and load forecasting methods to estimate consumption trends and identify opportunities for energy optimization

Third Quadrant Design, University of British Columbia **Sep 2020 – Aug 2022**

Electrical Team Member

- Designed electrical systems and riser diagrams for a **Solar Decathlon 2021 award-winning project**
- Developed a UI design prototype for the residents of the building
- Collaborated with interdisciplinary teams for completing various feasibility studies for the project

VOLUNTEER EXPERIENCE

IEEE, UBC Student Branch **May 2023 – Aug 2024**

Chair

- Organized professional development events with **AWS, BC Hydro, and Fluor**, covering topics like power engineering and AI applications

UBC Electrical & Computer Engineering Student Society **Jun 2021 – Apr 2023**

VP Communications

- Directed social media strategy, managed weekly newsletters, and coordinated student events, fostering engagement within the ECE community

AWARDS

Lorne R. Kersey Memorial Award 2024