

Sandesh Chhetri

E-mail: sandesh.chhetri@cqumail.com
Mobile: (04) 2755 8241
LinkedIn: linkedin.com/in/sandesh-chhetri/
Portfolio: csandesh.github.io/portfolio

CAREER OBJECTIVE

Technical minded, Engineers Australia certified professional electrical engineer passionate about computational science/design in electrical engineering. Looking to leverage my working knowledge of Electromagnetic Transients Program like ETAP, PaladinDesignBase etc. and my experience in electrical design/calculations in the power system industry.

EDUCATION

Master of Engineering (Electrical) Jul. 2019 – Jul. 2021
CQUniversity Rockhampton, QLD

Bachelor of Engineering (Electronics and Communications) Oct. 2014 – Nov. 2018
Pashchimanchal Campus, Institute of Engineering Pokhara, Nepal

WORK EXPERIENCE

Aurecon Mar. 2022 - Present
Electrical Engineer Townsville, QLD

- Analyse NMI datasets and prepare reports on load profiles for different army bases in Australia with the project delivery team utilising tools like MS-Excel and Python.
- Utilise power system applications like ETAP, PaladinDesignBase etc. for load flow, short circuit fault analysis, cable calculations in accordance with industry standards like IEEE, IEC and AS/NZS.
- Provide applied engineering design and technical consultation for customers on various Medium Voltage Electrical Systems in the areas of power system studies, power quality analysis, installation and maintenance.
- Responsible for generating lighting illumination design and drawings, utilizing DIALux and AutoCAD or other Software adhering to NCC and AS/NZS standards.

CPL (Choice, Passion, Life) Oct. 2020 – Feb.2022
Direct Support Worker Rockhampton, QLD

- Liaised with other staff, prepared and facilitated computer learning classes for people with disabilities.
- Engaged with clients to understand their needs and documented their progress and development.

Fitzroy River Water (Rockhampton Regional Council) Mar. 2021 – Jun. 2021
Electrical Engineering Intern Rockhampton, QLD

- Analysed submersible pumps SCADA data and developed an Ms-excel tool to detect blockages.
- Tested and modified the RTUs firmware for the new SCADA telemetry network.
- Reviewed and updated the single-line diagram of a sewage treatment plant in AutoCAD.
- Assisted the operations engineer in developing an effective control algorithm for variable speed drives, contributing to a research study that is used to optimise pump stations.
- Performed a site inspection and proposed scope of work to cover the installation of the UV system along with pumping systems, switchboards, and control systems.

SKILLS & INTERESTS

▪ Skills:

- | | | |
|-------------------|------------------------|------------|
| ❖ ETAP, | ❖ Python Data Analysis | ❖ AutoCAD |
| PaladinDesignBase | ❖ Circuit/Software | ❖ Ms-Excel |
| ❖ MATLAB/Simulink | Troubleshooting | |

- **Interests:** Cooking; photography; trekking; teaching; soccer

PROJECTS

Long Haul Optical Fibre Network

- Implemented a long-distance fibre optic network in VPI Photonics Design Suite, including calculations for fibre optic attenuation, bit error rate, and power budget.

Optimisation of Filter Transfer Function Using Genetic Algorithm

- Developed a genetic algorithm in python for maximisation of polynomial transfer function coefficients of an analog filter.
- Achieved the target frequency response of the second-order low-pass filter with response better than the butter-worth filter response in the passband region.

Load Frequency Control

- Derived the transfer functions of the governor, turbine, and generator with the provided data using system identification tool in MATLAB.
- Designed and tuned a continuous PID controller and then developed a discrete PID controller accordingly with the bilinear transformation method.
- Simulated the whole project in Simulink.

VOLUNTEER WORK

Central Queensland Innovation and Research Precinct (CQIRP)

Jul. 2020 – Aug. 2020

- Explored machine learning approaches for assessing mango crop quantity and quality. Primarily worked on data classification of mango fruits.

CERTIFICATIONS AND TRAINING

Professional Graduate (GradIEAust), “Engineers Australia”

Jul. 2019 – Current

Outsmarting intermittency, École Polytechnique, Coursera

Nov. 2021

- Learned upcoming grid challenges for renewable energy sources like wind and solar.