

SANDESH CHHETRI

Address: 3/301 Waterloo Street, Frenchville, QLD 4701
Mobile: (04) 2755 8241
Email: sandesh.chhetri@cqumail.com
Website: <https://csandesh.github.io/portfolio/>
LinkedIn: www.linkedin.com/in/sandesh-chhetri/

Career Objective

Passionate about electronics, data and telecommunications. Currently, I'm involved in optical filter design and machine learning algorithms and their implementations. Looking for opportunities to apply my engineering knowledge as an electrical engineer.

Academic Qualifications

Master of Engineering: Electrical **Jul. 2019 - Present**

CQUniversity North Rockhampton, QLD 4701, Australia

Bachelor of Engineering: Electronics and Communications **Oct. 2014 - Nov. 2018**

Paschimanchal Campus, Institute of Engineering, Pokhara, Nepal

Engineering Projects and Coursework

Sensors and Actuators with PIC18F4321 Micro-controller

- Built a Home Automation System implementing sensors, actuators, and some 3D printed blocks.
- Utilised microcontroller's timers and interrupts for communication with sensors.
- Analog to digital conversion and programming peripheral chips; learned the overview of CPU architecture and used some assembly language too.
- Learned about different communication protocols like UART, I2C, etc.

Load Frequency Control

- Found the Transfer Functions of Governor, Turbine, and Generator with given data provided using System Identification tool in MATLAB.
- Designed and tuned a continuous PID and developed a discrete PID controller accordingly with different transformation methods with the optimal sampling time and simulated the whole plant in MATLAB.

Decentralised Voting System Based on Blockchain

- Built a blockchain data structure from scratch in Python.
- Using Flask, built a web app where the blockchain network was implemented.
- Learned the essential components of blockchain network like consensus, decentralisation, immutability, distributed ledger, etc.

Technical Skills

- **Computer Networking:** Knowledge of network wiring and LAN setup. Knowledge of principles of cryptography, digital signatures, firewalls, etc.
- **Electronics:** Electronic circuits and integrated circuits design. Extensive knowledge of micro-controllers, sensors, and actuators.
- **Web development and Database:** Proven ability to design and maintain websites and databases. Basic knowledge of distributed file systems, i.e., Hadoop, Google file systems.
- **Data Visualisation and Analysis:** Basic working knowledge of data analysis, manipulation, and visualisation with Python and its frameworks and libraries.
- **Lab Equipment:** Oscilloscopes, digital multimeters, and soldering skills

Software Skills

C, C++, JavaScript, Node.js, SQL, Python, MATLAB

Work Experience

Student Volunteer:

CQIRP, CQUniversity, North Rockhampton, QLD 4701

Sept. 2019- Present

- Working with postdoc Dr Anand Koirala for exploration of machine learning approaches for assessing mango crop quantity and quality.

Student Volunteer:

CQIRP, CQUniversity, North Rockhampton, QLD 4701

Jul. 2019- Aug. 2019

- Worked under the direct supervision of the project supervisor, Dr Surya Bhattarai, while maintaining excellent communication with research assistants.
- Assisted with the counting, analysing, and restocking of gamma rays treated sesame seeds.
- Developed confident, articulate, and professional speaking abilities (and experience).

Lab Assistant:

Balodaya Secondary School, Pokhara, Nepal

Dec 2018 – Mar 2019

- Provided instruction to all lab users on the proper use of all equipment.
- Presented software packages and applications and developed lab templates.
- Configured hardware, devices, and software to set up workstations for students.

Certifications

Registered Electronics and Communication Engineer,
Nepal Engineering Council

May 2019

Affiliations

Student Member, “Engineers Australia”

Jul. 2019 – Current

Member, “Paschimanchal Campus Robotics club”

Dec. 2016 – Oct. 2018

Member, Club of Technical Students (COTS), Paschimanchal Campus

Jul. 2017 – Feb. 2018

Awards

Best project presentation on the use of blockchain for secured voting systems,
IOE Paschimanchal Campus

Sept. 2018

Interest

- Soccer
- Teaching
- Reading books
- Photography
- Trekking

References

Surya Bhattarai

Senior Research Fellow/Associate Professor
CQIRP, CQUniversity
Email: s.bhattarai@cqu.edu.au
Phone: (04) 2280 0518
Campus: Rockhampton North

Lam Bui

Senior Lecturer
School of Engineering and
Technology, CQUniversity
Email: l.bui@cqu.edu.au
Phone: (03) 9616 0629
Campus: Melbourne