Deng Mading

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**TECHNICAL SKILLS**

* C++, C, Python, JavaScript, HTML, CSS, Java, Postgres, and MATLAB
* Tools: Git, JIRA, Confluence
* Familiar with TCP, UDP, & Wireshark
* Analog and digital electronic design, Circuit design and simulation, soldering
* Electronics test equipment: oscilloscopes, multi-meters, waveform generators
* PSpice and OrCAD capture
* VHDL and Assembly language
* Advanced MS Excel and MS Word, Intermediate PowerPoint

**PROFESSIONAL EXPERIENCE**

**Co-op Student, Technical Standards Jan 2021 – Aug 2021**

Hydro Ottawa, Ottawa, ON

* Reviewed the test reports and upgraded 67 obsolete Riser Pole Standards and 67 Bill of Materials (BOMs) to ensure asset reliability and longevity
* Proven strong attention to detail in producing Substation Standards in pdf and MS Word for the new consultants
* Reviewed 4 test reports for the equipment, 20 third-party permits test reports, and implemented inspections to ensure strict compliance with the required standards and regulations
* Conducted Quick Pole analysis for the overhead tap on the existing line to determine its suitability

## Software Developer, Co-op student Sept 2020 – Dec 2020

Employment and Social Development Canada (ESDC), Ottawa, ON

* Demonstrated leadership in planning, designing, and maintaining working software with the 5-member Agile Scrum team
* Programmed using Java leading to the successful completion of the OASIS project
* Developed test cases and created technical documentation accurately
* Collaborated with team members to refine testing strategies, planning, execution, and validation of products and solutions

## Software Engineering Support, co-op student May 2020 – Aug 2020

Best Theratronics Ltd., Kanata, ON

* Teamed together with other engineers to take part in the research and development of the blood irradiator machine and suitable single-board computers
* Proven quick learner of software and hardware architecture of the control systems
* Performed software verification tests for the blood irradiator machine’s software by following test procedures accurately
* Produced technical documentation professionally to support the design of the control system and test report of the blood machine’s software

## Open Recreation Supervisor Sept 2017 – March 2018

Carleton University, Ottawa, ON

* Proven ability to supervise the recreation facility effectively with minimum supervision
* Ensured standards of behaviour and code of conduct were strictly adhered to in the sporting area
* Committed to diversity and inclusion and the health & safety policy of the university

**ACADEMIC EXPERIENCE**

**A simple client-server application (written in Python)**

* The application was a room reservation application, in which a client manages a set of room reservations
* Clients can contact the server to retrieve information about available rooms,  
  timeslots, bookable days, check existing reservations for a specific room, and make and  
  withdraw reservations.

**Machine Learning and Artificial Neural Networks for Accelerated Silicon Photonics Design**

* A silicon photonics structure was parameterized, and multiple versions of the structure were simulated using a commericial finite difference time domain (FDTD) simulator (Lumerical)
* An artificial neural network (ANN) was then trained using machine learning techniques and the simulated data.
* The resulting ANN was used to accelerate the design flow of similar parameterized silicon photonics structures by avoiding many of the FDTD simulations.

**Web Development**

* Book Library Website project

Project repository link: <https://github.com/DengPanchol/book-project>

Link to the interactive website: <https://book-project.vercel.app/>

* Designed and developed books library website where a person can view books, search a book, and add new books.
* The project was done using HTML, CSS, JS, Event Listeners, DOM/jQuery

**6G NTN (Non-Terrestrial Networks): Integrated Terrestrial-Satellite Networks of 2030s.**

* Researched on 5G Networks and Current & Upcoming Satellite Networks
* Covered enabling technologies in current/upcoming satellite networks
* Discussed the history of integration during the 3G and 4G eras and the obstacles in front of integration
* Provided the vision for the integrated terrestrial-satellite networks in the 6G era of the 2030s

**Automated Medication Management System Project**

* Demonstrated ability to multi-task in devising a pill sorter system, assembling a working circuit, and writing an Arduino code for the automated system with a mean grade of A-
* Recognized collaborative team player and contributed to the growth and development of the project

**Amplifier Project**

* Designed a single transistor amplifier and two transistor amplifiers successfully within timelines
* Achieved 80% on a project for building the circuit, testing, and presenting it to the teaching assistant for final testing to ensure its fit with the design requirements

**Active Band-Pass Filter Project**

* Accomplished a high mark of 4.5/5 for implementing a second-order band-pass filter and verifying the design through simulation
* Analyzed the data obtained from simulation and compared it to the data obtained from constructed hardware, ensuring consistency

**EDUCATION**

**Bachelor’s Degree in electrical engineering Graduated June 2022**

Carleton University, Ottawa, ON

* Bachelor of Engineering, Cooperative Program
* Completed 4 co-op work terms

**Certificate of Training May 2022 – Aug 2022**

Code Youth, Kanata, ON

* Completed the Code Youth coding program using HTML, CSS, JavaScript, DOM, APIs, PostgreSQL, and Jira