SEA RAN CLEON LIEW

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SKILLS

Programming Languages: Python, R, SQL, Java, C, Bash, Lua

Libraries: scikit-learn, Keras, PyTorch, TensorFlow, NumPy, SciPy, Pandas, Matplotlib, ggplot2, Cuda, Hugging Face Transformers, BeautifulSoup, Scrapy, Splash, Selenium, Appium

Technologies: AWS Cloud (Batch, CloudWatch), Git, Bitbucket, Jira, Confluence, Power BI, Jupyter Notebook, Linux

WORK EXPERIENCE

Loan Servicing Analyst – RBC Capital Markets   Toronto, ON (April 2025 – Present)
- Maintained syndicated loan data in Advanced Commercial Banking System (ACBS), ensuring alignment with agreements.
- Handled loan operations, including fee calculations, funding requests, and payment via Excel and internal systems.
- Performed daily account reconciliations, investigated discrepancies, and resolved issues.

Data Science Research Assistant - University of Waterloo   Waterloo, ON (May 2023 – Feb 2024)
1) Metastatic Cancer Medical Image Analysis Project under Prof. Subha Kalyaanamoorthy
- Achieved 78.28% accuracy for nerve cell image classification using **PyTorch** by implementing **feature engineering** and **hyperparameter tuning** to fine-tune CV Models such as **ViT**, **ResNet**, and **CNNs**, improving baseline accuracy by 4%.
- **Presented** findings on model performance to stakeholders using **PowerPoint**, **R (ggplot2)**, **Matplotlib**, and **Pandas.**
2) FHIR-Formatted Healthcare Data Encoding Project under Prof. Bryan Tripp
- Applied **data encoding methods** such as **Sinusoidal Encoding** in **Python** to enhance data inputs to the transformer.
- Used **SQL** to **cleanse**, **normalize**, and **structure FHIR-formatted datasets**, optimizing them for model input.

Deep Packet Inspection QA Engineering Intern - Nokia   Ottawa, ON (Sep 2022 – Dec 2022)
- Automated traffic capture tasks for 20+ apps (Web, Android, iOS) using **Python**, **Selenium**, **Appium**, and **Linux Crontab**.
- Analyzed traffic data captured by 60+ application filters by performing packet-level analysis with **Wireshark** to **troubleshoot issues** and **submit bug reports** for 4 filters to improve classification accuracy and enforce proper QoS policies.
- Scheduled recurring automated testing tasks using **Linux Crontab** to collect testing data.

Data Validation Intern - Ontopical   Calgary, AB (Remote) (Jan 2022 – Apr 2022)
- Built 50+ **web scrapers** to contribute to the ETL process for multimedia data collection using **Scrapy**, **Splash**, and **Lua**.
- Executed web scrapers on **AWS Batch**, monitored their performance using **AWS CloudWatch**, collected and aggregated document type counts from each scraper post-execution, and leveraged **Power BI** to visualize document distribution trends.
- Did **version control** and task management within an **Agile Scrum** framework using **Git**, **Bitbucket**, **Jira**, and **Confluence**.

Assurance Practice Intern – PricewaterhouseCoopers (PwC)   Hong Kong (May 2021 – Jul 2021)
- Analyzed **financial data** and **trends** using **Excel**, identifying inconsistencies in reports to support **audit planning**.
- Performed **detailed testing** and risk assessments to enhance compliance and reporting accuracy.

EDUCATION

University of Waterloo   Waterloo, ON (Sep 2020 – Jun 2024)
Bachelor of Mathematics, Major in Computational Mathematics (Co-op), Minor in Computing
- Cumulative GPA: 85/100; Graduated with Distinction

PROJECTS/ PUBLICATION

Beam - An Algorithm For Detecting Phishing Link 2022 APSIPA Annual Summit and Conference (**Github code**)
- Applied six different NLP AI models, including fine-tuned BERT, CNN, and LSTM networks, for phishing URL detection.
- Utilized various **NLP-based tokenizations** (character & subword) and evaluated their performance on processed datasets.

Use Of Subword Tokenization For Domain Generation Algorithm (DGA) Classification Cybersecurity 6, 49 (2023).
- Developed an integrated scheme consisting of various NLP models for better classification of domains generated by DGAs.