ZEYONG JIN

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EDUCATION

Simon Fraser University *Sep 2018 - Apr 2022*
Bachelor of Science (with Distinction) Burnaby, BC

- **Program**: Major in Computing Science, Concentration in Information Systems, Minor in Mathematics.
- **Grade**: Cumulative GPA of 3.62.
- **Related Courses**: Data Structures, Algorithms, Computer Systems, Operating Systems, Software Engineering, Requirements Engineering, Database Systems, Natural Language Processing, Computational Data Science, Data Mining.

Fraser International College *May 2017 - Apr 2018*
UTP Stage II: Science Burnaby, BC

- **Program**: Major in Computing Science.
- **Grade**: Cumulative GPA of 3.92.
- **Award**: Dean's Honour Roll *(2017 Summer)*.

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Java, Python, R, Assembly, JavaScript.
- **IDEs & Development Tools**: Microsoft Visual Studio, IntelliJ IDEA, Android Studio, PyCharm, R Studio, Google Colab, Jupyter Notebook.
- **Database Systems**: Microsoft SQL Server 2018, MySQL.
- **Operating Systems**: Linux *(Ubuntu)*, Windows.
- **Version Control Tools**: Git *(GitLab, GitHub)*.
- **UI/UX Design Tools**: Balsamiq, Figma.
- **Documentation & Office Tools**: LaTeX, R Markdown, Microsoft Office Suite *(Word, Excel, PowerPoint)*.
- **Certificates**: Machine Learning Specification *(Provided by Stanford University on Coursera)*; Data Science in Python, Applied Machine Learning in Python *(Provided by the University of Michigan on Coursera)*.

TRANSFERABLE SKILLS

- **Communication & Teamwork**: Excelled in leading diverse teams, fostering collaboration and persuading peers.
- **Time Management**: Consistently meets deadlines through effective prioritization and planning.
- **Continuous Learning**: Possesses a strong curiosity and openness to acquiring new knowledge and skills.
- **Languages**: Bilingual in Mandarin *(Native)* and English *(Proficient)*.

PUBLICATION

- **Z. Jin**, J. Zhao, Z. Qian, L. Cao, Y. Wang, Y. Ding, Y. Hu, Z. Zhang. *Role-Play Paradox in Large Language Models: Reasoning Performance Gains and Ethical Dilemmas.* Submitted to *The 47th Annual Meeting of the Cognitive Science Society (CogSci 2025)*, 2025. Available at: arXiv:2409.13979 [cs.CL].

ACADEMIC RESEARCH

Role-Play Paradox in Large Language Models: Reasoning Performance Gains and Ethical Dilemmas *Oct 2024 - Jan 2025*

- Investigated the effects of role-playing in large language models *(LLMs)* on reasoning performance and ethical risks, revealing that role simulation enhances problem-solving but also amplifies biases and toxicity.
- Designed and conducted empirical evaluations on GPT-4, GPT-3.5, and Mixtral-8x7B using stereotype and toxicity benchmarks *(CrowS-Pairs, StereoSet, HarmfulQ)*, demonstrating how automated role assignment exacerbates biases.
- Co-authored a research paper submitted to *CogSci 2025*, contributing to AI ethics literature on bias mitigation and safe deployment of LLMs in high-stakes applications.

PROFESSIONAL EXPERIENCES

Rancho Management Services (B.C.) Ltd. *Dec 2024 - Present*
Accounts Payable Supervisor Vancouver, BC

- Developed a cheque tracking platform to streamline accounts payable operations by automating cheque status updates, reconciliation, and reporting processes. Developed using JavaScript, and integrated into the department's workflow, with source code available on GitHub https://github.com/zeyongj/Cheque-Tracking.
- Enhanced the department's payment processing system by creating automated tools in Python to generate detailed payment reports, improving data accuracy and processing speed by 20%.
- Oversaw invoice processing, vendor payments, and reconciliation of accounts to ensure timely and accurate financial transactions while maintaining compliance with company policies and accounting standards.

Rancho Management Services (B.C.) Ltd. *Apr 2024 - Dec 2024*
Accounts Payable Clerk Vancouver, BC

- Engineered Python-based automation to monitor over 10,000 invoices from over 2,000 vendors, achieving a 40% reduction in manual file handling and improving data aggregation efficiency by 60%.
- Built a dynamic programming solution to optimize invoice payment processing, ensuring fund allocation while maintaining reserve requirements. Implemented logic to prioritize payments based on invoice classifications and available cash flow.
- Streamlined financial operations by integrating automated data entry and validation tools, reducing manual errors and enhancing the accuracy of payment records through robust data analysis and reporting.

Simon Fraser University *Jan 2021 - Dec 2021*
Teaching Assistant Burnaby, BC

- Facilitated grading processes using Crowdmark for the course STAT 203 *(Introduction to Statistics for the Social Sciences)*, providing prompt and constructive feedback to students and instructors *(Spring Term)*.
- Assisted in grading assignments and exams via Canvas for the course CMPT 115 *(Exploring Computer Science)*, ensuring timely feedback to both students and faculty *(Fall Term)*.
- Hosted weekly online office hours, addressing undergraduate queries related to computing science. Addressed student inquiries regarding grading, ensuring all responsibilities were completed punctually.
- Contributed to the Department of Statistics and Actuarial Science, working alongside Dr. Harsha Perera and Mr. Scott Pai. Supported the School of Computing Science under the supervision of Dr. Diana Cukierman.

ACADEMIC PROJECTS

Prompt-based Text Matching Methods for Fake News Stance Detection *Sep 2021 - Dec 2021*
CMPT 413: Computational Linguistics; Supervised by Prof. Angel Chang Burnaby, BC

- Leveraged the Bidirectional Encoder Representations from Transformers *(BERT)* model to analyze the stance relationship between news headlines and their corresponding articles.
- Fine-tuned the BERT model for enhanced accuracy in detecting stance relationships, achieving a notable accuracy of 90.37% on the Fake News Competition *(FNC)* dataset.
- Benchmarked the BERT-based model against four baseline algorithms, highlighting its superior performance in fake news classification.
- Project repository and detailed documentation available at https://github.com/zeyongj/Fake-News-Stance-Detection. A comprehensive presentation can be viewed at https://www.youtube.com/watch?v=DtKjSMv31RQ&ab_channel=ZeyongJin.

COVID-19 Patient Outcome Prediction *Jan 2021 - Apr 2021*
CMPT 459: Data Mining; Supervised by Prof. Martin Ester Burnaby, BC

- Built and optimized predictive models for COVID-19 patient outcomes using LightGBM, Support Vector Machine *(SVM)*, and Multilayer Perceptron *(MLP)*, achieving 0.8840 accuracy and 0.8391 F1-score with LightGBM.
- Engineered new features and applied hyperparameter tuning to improve model performance, handling imbalanced data effectively.
- Project repository available at https://github.com/zeyongj/Prediction-of-The-Outcome-of-A-COVID-19-Patient.

Practical Parent Application *Sep 2020 - Dec 2020*
CMPT 276: Introduction to Software Engineering; Supervised by Dr. Brian Fraser Burnaby, BC

- Developed an Android application in Android Studio for task delegation among children, including a coin-flip feature for fair task assignment.
- Integrated a real-time task tracking system and a breathing rhythm regulator to enhance user engagement.
- Project repository available at https://github.com/zeyongj/Pratical-Parent-Application.

PERSONAL PROJECTS

ConnectX Agent *Sep 2024 - Oct 2024*
Kaggle Competition Vancouver, BC

- Developed a custom agent utilizing the Minimax algorithm with Alpha-Beta Pruning to compete in the ConnectX Kaggle competition, focusing on strategic decision-making and efficient exploration of the game tree.
- Designed and implemented a heuristic evaluation function to assess board states, considering factors such as control of the center column, potential winning sequences, and threats posed by the opponent.
- Achieved a highest score of over 920, ranking 7th among over 100 participants, demonstrating strong algorithmic performance and effective decision-making in real-time gameplay scenarios. Project repository available at https://github.com/zeyongj/ConnectX-Agent.

Loan Approval Prediction *Sep 2024 - Oct 2024*
Kaggle Competition Vancouver, BC

- Achieved a top 30% ranking in the Kaggle Playground Series competition focused on loan approval prediction, demonstrating strong model performance.
- Applied LightGBM with extensive hyperparameter tuning using Optuna, resulting in a final ROC-AUC score of 0.96025, significantly improving over initial benchmarks.
- Created new features to enhance model predictive power and addressed class imbalance using SMOTE, ensuring robust classification results. Project repository available at https://github.com/zeyongj/Loan-Approval-Prediction.