

# Richard Cornelius Suwandi

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## EDUCATION

- **The Chinese University of Hong Kong, Shenzhen** Shenzhen China  
*PhD in Computer and Information Engineering* *Aug 2023 - May 2027 (Expected)*
  - **Supervisors:** Prof. Feng Yin, Prof. Tsung-Hui Chang (IEEE Fellow)
  - **Honors & Awards:** School of Science and Engineering Postgraduate Studentship
  - **Research Interests:** Bayesian optimization & multi-armed bandits, decision-making under uncertainty, generative models
- **The Chinese University of Hong Kong, Shenzhen** Shenzhen China  
*BSc in Statistics (Data Science Stream)* *Sep 2019 - May 2023*
  - **Honors & Awards:** Full Tuition and Accommodation Scholarship, Guangdong Provincial Government Outstanding International Student Scholarship, School of Data Science Dean's List Award, Undergraduate Research Award
  - **Relevant Coursework:** Gaussian process for machine learning & signal processing (graduate-level), Bayesian statistics, machine learning, regression analysis, statistical inference

## RESEARCH EXPERIENCE

- **Bayesian Learning for Signal Processing (BLSP) Group** Shenzhen, China  
*Undergraduate Research Assistant* *Jun 2021 - May 2023*
  - **Supervisor:** Prof. Feng Yin
  - Designed a novel grid spectral mixture kernel for Gaussian process with multidimensional input data
  - Developed two distributed learning frameworks for Gaussian process regression based on the successive convex approximation (SCA) and alternating direction method of multipliers (ADMM) algorithm
  - Presented a paper that was accepted to the 25th International Conference on Information Fusion (FUSION) 2022
- **Shenzhen Research Institute of Big Data (SRIBD)** Shenzhen, China  
*Undergraduate Research Assistant* *Jun 2020 - May 2021*
  - **Supervisor:** Prof. Tsung-Hui Chang
  - Investigated the federated matrix factorization (MF) problem for data clustering and recommender systems
  - Combined the alternating minimization and model averaging (MA) technique to solve the federated MF problem
  - Co-authored a paper that was accepted to the 46th IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2021

## PUBLICATIONS

- **R. C. Suwandi**, Z. Lin, Y. Sun, Z. Wang, L. Cheng and F. Yin, "Gaussian Process Regression with Grid Spectral Mixture Kernel: Distributed Learning for Multidimensional Data," 2022 25th International Conference on Information Fusion (FUSION), 2022, pp. 1-8.
- S. Wang, **R. C. Suwandi** and T. -H. Chang, "Demystifying Model Averaging for Communication-Efficient Federated Matrix Factorization," ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2021, pp. 3680-3684, doi: 10.1109/ICASSP39728.2021.9413927.

## TEACHING EXPERIENCE

- **MAT2040 Linear Algebra** CUHK-Shenzhen  
*Teaching Assistant* *Fall 2023, Spring 2024*
  - Taught weekly tutorial sessions and held office hours for undergraduate students
  - Designed homework problems to help students apply the concepts covered in class
  - Assisted the course instructor by drafting announcements, grading homework, and preparing exams

## SKILLS

- **Programming Languages:** Python, R, SQL, Julia, MATLAB, C++
- **Data Science & Machine Learning:** NumPy, SciPy, Pandas, Scikit-Learn, TensorFlow, Keras, PyTorch
- **Database:** MySQL, PostgreSQL, MongoDB
- **Software & Tools:** Git, Docker, Jupyter, Colab, Visual Studio Code, RStudio, Vim, Excel, L<sup>A</sup>T<sub>E</sub>X
- **Operating Systems:** macOS, Windows, Linux