

# KOH SI XING

Email: [ksxing8388@gmail.com](mailto:ksxing8388@gmail.com)

LinkedIn: <https://sg.linkedin.com/in/kohsixing>

Website: <https://kohsixing.github.io>

## EDUCATION

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### National University of Singapore (NUS)

Aug 2025 - Present

Master of Science (M.Sc.) in Data Science and Machine Learning · *Part-time*

- Incoming Academic Year 2025/26

### National University of Singapore (NUS)

Aug 2020 - Dec 2023

Bachelor of Science (B.Sc. Hons.) in Business Analytics · *Full-time*

- Honors: Honors (Distinction) - Second Class (Upper) Honors Equivalent
- Specialization in Financial Analytics

### Singapore Polytechnic (SP)

Apr 2014 - Mar 2017

Diploma in Infocomm Security Management (with Merit) · *Full-time*

- GPA: 3.83 / 4.00
- Specialization in Forensics Investigation

## EXPERIENCE

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### Research Assistant

Jan 2024 - Present

National University of Singapore (NUS) · *Full-time*

- Retain and expand upon responsibilities from my previous tenure as a student research assistant
- Work closely with the Principal Investigator (PI) to design and conduct experiments on human-algorithm collaboration through image classification tasks, analyzing responses to understand the interaction between humans and algorithms
- Develop and deploy R Shiny web applications for real-time data collection, ensuring scalability and performance under high traffic conditions using Shinyapps.io
- Automate participant recruitment and response collection using Prolific API and Qualtrics API, streamlining the participant management and survey creation process, thereby reducing manual effort when bulk launching experiments
- Perform data cleaning and Exploratory Data Analysis (EDA) on data collected from scraping, experiments, or industry clients
- Apply Natural Language Processing (NLP) and sentiment analysis techniques to text datasets, investigating human behavior and responses, particularly in projects on how Large Language Models (LLMs) affect the content in online communities
- Optimized machine learning models by leveraging parallel programming and high-performance computing (HPC) cluster for grid search and hyperparameter tuning
- Contribute to early-stage Proof of Concept (POC) for new projects, defining scope and providing technical input when needed
- Guide junior team members on ML tasks or relevant analytics projects

### Student Research Assistant

Sep 2023 - Nov 2023

National University of Singapore (NUS) · *Part-time*

- Conducted literature reviews to explore methodologies for future research on effects of LLMs on online communities, and human – algorithm collaboration
- Automated data collection workflows using GitHub Actions, enabling scheduled scraping of online data for research projects
- Performed data cleaning and preprocessing to convert scraped data into suitable format for analysis or modeling

### Business Analytics Intern

Jan 2023 - Jul 2023

The Development Bank of Singapore (DBS) Limited · *Internship*

- Collected and cleaned employee reviews to perform in-depth analysis and identify trends in employee sentiments
- Applied NLP techniques to analyze verbatims in employee reviews and build multi-label text classification models, achieving an F1-score of at least 0.85
- Developed dashboards using tools like Tableau and Excel, to deliver actionable insights to the Managing Director of Transformation Group
- Created and distributed Qualtrics surveys, visualizing and analyzing survey responses to understand employee needs and to improve their experience working in DBS

## Associate Research Engineer

Aug 2019 - Aug 2020

Trustwave Holdings · *Full-time*

- Collected data from relevant online sources of malware reports
- Assisted team members by scraping online data related to cybersecurity to build a corpus for their NLP model
- Built a machine learning model for malware classification using indicators from cybersecurity reports, achieving an ROC AUC score of 0.88
- Developed a prototype that automates malware categorization by integrating the machine learning model with the MITRE ATT&CK Framework, generating detailed summaries for threat analysis based on submitted malware reports

## Cyber Security Intern / Associate Engineer

Sep 2016 - Jun 2017

Singapore Telecommunications (SingTel) Limited · *Internship*

- Conducted POC on emerging cyber security technologies such as Cloud Access Security Brokers (CASB) and Deception Technologies, providing valuable insights into enterprise security strategies
- Analyzed large-scale network traffic data to identify anomalous patterns and detect potential cyber threats

## Skills

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- Programming Skills: Java, Python, R
- General IT Skills: Computer Networking, Database (SQL, MongoDB), Web Development, Git
- Data Science & ML: Scikit-learn, Imblearn, Tensorflow, Dplyr, HPC Cluster, HuggingFace
- Cybersecurity: Kali Linux, REMnux SIFT

## Awards

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- Top Students for BT2102 Data Management and Visualization (Associated with NUS)
- SingTel Cybersecurity Cadet Scholarship (Associated with SP)
- Singapore Polytechnic Scholarship (Associated with SP)
- Director Honor Roll for AY2015/16 (Associated with SP)

## Certifications

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### Financial Analytics Specialization

*Certificate of Merit*

National University of Singapore

### Higher Mathematics

*Certificate of Completion*

Singapore Polytechnic

### Organizational Systems Wireless Auditor

*Wireless Auditing & Pentesting Certification*

ThinkSECURE

### Organizational Systems Security Analyst

*Enterprise Security Certification*

ThinkSECURE

### Mobile Device Forensics

*Certificate of Completion*

Paraben Corporation