

Minseo KIM

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INTERNSHIP

Assistant Engineer, Data Analytics (Intern)

Jan 2023 - Present

Air Liquide

Singapore

- Revamped Power BI dashboard data queries with SQL and automated data export into Google Sheets through gateway connections and Google Apps Script, saving thousands of costs in man-hours by eliminating need for daily manual entry.
- Successfully identified noisy time-series data through Hilbert-Huang Transform, bringing huge potential in quantification of underlying noise level in data which was previously only possible with visual inspection.
- Spearheaded data reduction project by suggesting new algorithm and brought about more than 95% compression in process data while maintaining fidelity score of at least 90%.
- Implemented predictive maintenance analyses through statistical process control for various process parameters, resulting in significant early detection of unusual events by five days.

Software Development Intern

May 2022 - Jul 2022

El Pando Pte Ltd

Singapore

- Designed the Front-end of the new *company website* with added interactivity and responsive design, utilising libraries such as jQuery and Bootstrap 5.
- Handled ASP.NET Code-behind approach, which was implemented by the company for their customized software services for different clients.

Undergraduate Student Research Intern

Jan 2022 - May 2022

Digital Signal Processing Lab, School of Electrical and Electronic Engineering (EEE)

Singapore

- Developed a probabilistic neural network, incorporating a bivariate normal distribution loss function to predict the associated perceptual of soundscapes.

EDUCATION

Nanyang Technological University, Singapore

Aug 2020 - Jul 2024

B.Eng (Chemical and Biomolecular Engineering) with CN Yang Scholars' Programme

CGPA: 4.68/5.00

CO-CURRICULAR ACTIVITIES

President - 17th Management Committee

Sep 2021 - Aug 2022

Students' Chemical and Biomedical Engineering Club (SCBE Club)

- Improved welfare of the faculty of more than 1000 undergraduates through mentoring 6 different directors in event planning such as SCBE Chem-E-Car Competition and Festival Week.
- Ensured smooth transition of faculty's merger with Division of Chemistry by reorganising club structure and implementing new initiatives such as the clan system.

Business Director - 16th Management Committee

Sep 2020 - Aug 2021

Students' Chemical and Biomedical Engineering Club (SCBE Club)

- Generated S\$10,000 revenue through school merchandise sales by extensively collaborating with publicity team.
- Coordinated with different companies for the biannual Exam Welfare Initiatives, which has garnered many positive reviews.

PROJECTS

Classifications of Soundscapes with Deep Learning Algorithm

Aug 2021 - Nov 2021

Digital Signal Processing Lab, School of Electrical and Electronic Engineering (EEE)

- Implemented convolutional neural network (CNN) architecture as predictive model for soundscape affective responses and explored optimisation of audio input for the model with Mel spectrograms.

Video Summarisation in Surveillance and Security Systems

Jan 2021 - Apr 2021

SCALE@NTU, School of Computer Science and Engineering (SCSE)

- Experimented with existing convolutional neural networks on human activity recognition (HAR) with Tensorflow/Keras.

CASE COMPETITIONS

NUS Fintech Month 2022 Blockchain Hackathon

Jan 2022

Problem Statement: "NFTs: Mint, Market or Monetize"

- Proposed the creation of decentralized NFT marketplace, providing gateway to create universal NFTs that can exist across multiple chains.
- Presented the prototype in the semi-finals for being the top 29 out of 100 teams.

COURSEWORK

Meta Database Engineer Specialization

Apr 2023

Coursera

- SQL | Database Clients | Data Modelling

The Complete Node.js Developer Course (3rd Edition)

Jun 2022

Udemy

- Asynchronous API fetching | REST API | WebSocket

TECHNICAL SKILLS

Programming languages: Python, JavaScript

Miscellaneous: SQL, MongoDB, Firebase, Power BI, \LaTeX

Web Technologies: React, Node.js, jQuery, Bootstrap 5, Sass