Lim Chao Zhou

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Highly motivated and results-driven final year undergraduate student with a strong foundation and approximately 2+ years of experience in ML and AI through projects and internships. With a passion for solving complex problems through data-driven insights, I am poised to embark on a promising career as an ML Engineer upon my graduation in May 2024.

SKILLS & INTERESTS

- **Machine Learning** *Supervised, Unsupervised Machine Learning, Classification Regression Models, KNN, Linear and Logistic Regression, K-Means Clustering, SVM, Decision Trees, Naïve Bayes*
- **Neural Networks** *CNN, LSTM, NLP, Computer Vision, Transformers*
- **Tools** *OpenCV, TensorFlow, Media Pipe, Open Pose, Keras, Sci-Kit Learn, Hugging Face*
- **Programming Languages** *Python, Java, JavaScript, with basics in HTML, CSS, XML*
- **Hardware and Systems** *GPU, CUDA, Linux, Windows, Jupyter*
- **Software** *CAD Software SolidWorks, Fusion 360, MATLAB, Mathematica, COMSOL Multiphysics, Android Development, Power BI, Tableau*
- **Spoken Languages** *English (Native), Mandarin*
- **Soft Skills** *Teamwork, Leadership, Problem Solving, Critical Thinking, Adaptability, Independence, Time-management*
- **Interests** *Working out, Keeping Fit, Sports, Watching Movies, Being a better person than I was yesterday*

EDUCATION

National University of Singapore, Singapore   **Expected May, 2024**
B.Eng. Engineering Science (Hons), with a specialization: Computational Engineering Science, Minor: Artificial Intelligence
- **GPA: 4.12/5.0 (Honours with Distinction)**
- NUS Volleyball Varsity Player, Captain Eusoff Hall Volleyball club, PAL Mentor Eusoff Hall, Orientation Group Leader ESP sub-club

University of Toronto, Canada   **Winter Exchange Programme**
Engineering Science, Faculty of Applied Science and Engineering   *Jan 2023 – Apr 2023*
- Courses Taken: ROB311: Artificial Intelligence, ROB313: Introduction to Learning from Data, APM462: Non-linear Optimization, MAT246: Concepts in Abstract Mathematics, APS112: Engineering Strategies and Practices

Tampines-Meridian Junior College, Singapore   **November, 2017**
Science, H2 Physics, Mathematics, Economics, H1 Chemistry
- **Dean's List Pre-U 1**
- **MOE Edusave Academic Achievement. CDC-CCC Merit Award top 25%**
- Captain School Volleyball Team

Pasir Ris Crest Secondary School   **November, 2015**
Science, Double Mathematics, Double Sciences, Double Humanities
- L1R5: 10 (4 Distinctions)
- **MOE Edusave Scholarship 2012 and 2013 ($500 each) top 10%, Promotion in Stream NA to Express, Model Crestian Award 2013 and 2014, Cross Country Champion 2014**
- Captain School Volleyball Team, Student Leaders Board Member

WORK EXPERIENCE

SIA-NUS Digital Aviation Corporate Laboratory, Singapore   **May 2023 – Present**
ML Research Engineer   *Internship, Part-time*
- Research Focus: Predicting passenger discomfort in long-haul Business Class flights using multi-modal sensors and developing AI algorithms to detect onset of discomfort.

- Employ <u>ML algorithms</u> to predict passenger's seat discomfort using pressure data and postural analysis via <u>computer vision.</u>
- Conduct pilot studies on participants and liaise with SIA for further development of IRB proposal.
- Delivered insightful data-driven reports and updates to Principal Investigator (PI) and key SIA stakeholders, facilitating informed decision-making processes.
- Key Contributions: Develop android applications (full-stack) to integrate with the cabin simulator's mocked up In-Flight Entertainment system (IFE), to collect subjective data.

Automated Micron Assembly, Singapore   May 2022 – Aug 2022
Robotics Engineer   *Internship*
- Employ <u>Computer Vision and Pattern recognition algorithms</u> to automation products for marketing purposes.
- Directed small projects which can be viewed on my LinkedIn page [here](#).
- Create SOPs for clients to use with company's products.
- Participate and engage in meetings with existing and prospective clients to discuss opportunities on future collaborations.
- Maintain, edit and update company's website such as uploading of files, videos and articles, using cPanel and HTML.

Identiv Private Limited   June 2021 – July 2021
Production Operator   *Internship*
- Inspected final products to assess compliance with quality standards and established tolerances.
- Inspected final products for defects and flaws using proper QA procedures.
- Assisted senior-level engineers in the implantation of RFID chips onto smart tags.

Juan Kuang Private Limited   March 2020 – June 2020
Administrative Staff   *Full-Time*
- Built and maintained excellent customer relationships through timely response to inquiries

Singapore Armed Forces   Apr 2018 – Feb 2020
Platoon Sergeant 749 SIR Charlie | Feb 2020 -- Present   *Reservist National Service*
- Lead 40 NS men during the next 10 years of reservist both in and off the field

Platoon Sergeant 3 SIR Charlie| Apr 2019 – Feb 2020   *Full-Time National Service*
- Lead and take responsibility of 30 – 40 NSFs during trainings both in and off the field
- **Company Best Commander**
- Appointment to Platoon Sergeant 749 SIR Charlie Company

Section Commander 3 SIR Charlie | Nov 2018 – Apr 2019   *Full-Time National Service*
- Lead and take responsibility of 10 - 15 NSFs during trainings both in and off the field
- **Promotion in Rank to Second Sergeant (Highest attainable rank as an NSF specialist)**
- Appointment to Platoon Sergeant 3 SIR Charlie Company

Specialist Cadet | June 2018 – Nov 2018   *Full-Time National Service*
- **Graduated as an Honoured Graduate (Silver Bayonet Recipient) for top 10% of cadets**
- **Commendation letter from Head Specialist and Warrant officer Institute (SWI).**
- Appointed Section Commander 3 SIR Charlie Company

FEATURED PROJECTS

- **Final-Year Thesis** *Using High-level Natural Language to Command Embodied Artificial Intelligence:* **Top 12th placing on the ALFRED'24 Challenge Leaderboard.**
- **NUS School of Computing 24th SoC Term Project Showcase (STeP)** 1st Runner Up. *Utilize LLM for grammatical error correction using Seq2Seq models.*
- **Real time sign to text translation** *Built a custom LSTM model to train a computer vision model to recognize hand gestures and translate to written text*
- **Vision and pattern recognition with collaborative robot** *Incorporate vision and pattern recognition function in The Sawyer to detect and adapt to any changes in its environment during a simple pick and place task via the use of landmarks. Video can be viewed in my LinkedIn [here.](#)*