CHEN XIHAO

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EDUCATION

National University of Singapore   Aug 2019 – Present (exp. May 2023)
Bachelor of Computing (Honours) in Computer Science
Minor in Management
GPA: 4.62 / 5.00

Hwa Chong Institution (College)   Feb 2017 - Nov 2018
Singapore-Cambridge GCE Advanced Level
Recipient of the Outstanding Student Award, 2018

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, C, Dart, SQL, Markdown
Libraries, Frameworks & Tools: NodeJS, React, ReactNative, Flutter, TailwindCSS, Postman, TensorFlow, Keras, NEAT-Python, Git, GitHub

EXPERIENCE

Software Engineer Intern   Feb 2021 – Aug 2021
Cialfo Pte. Ltd., Singapore
- Focused on front-end software development for college application workflow.
- Planned, researched, and developed more than 30 major and minor features for Cialfo Explore (for 1600+ high schools, 1000+ universities and 4000+ university representatives) and administrative panel (for 50+ internal staff).
- Proposed and spearheaded UI improvements for more intuitive human computer interactions, and overall application flow and product structure.
- Designed and improved on the efficiency of client-server communications by ~5%.
- Strategised and developed end-to-end testing procedures with the QA team.
- Conducted daily stand-up and bi-weekly retrospective meetings as scrum master for an agile team of 15.

Undergraduate Teaching Assistant   Aug 2020 – Nov 2020
Dept. of Computer Science, National University of Singapore
- Module taught: CS1101S Programming Methodology.
- Accredited with overall performance rating: 4.9 / 5.0.
- Tutored a group of 8 students the foundations of computational thinking using Source (a NUS adaptation of JavaScript).
- Prepared weekly coursework materials and graded online assignments (around 50 assignments per student in total).

Intern   Mar 2019 – Jun 2019
Gosuncn Technology Group, China
- Shadowed Chief Engineer and head of the Department of International Sales.
- Conceptualised software architecture design strategies and hardware-software interfacing techniques in AR-enhanced military-use body-worn cameras and portable video surveillance devices.
- Designed and drafted user and technical documentations (in English and Chinese).

PROJECTS AND RESEARCH

Undergraduate Researcher (in progress)   Aug 2021 – Present
Dept. of Computer Science, National University of Singapore
- Project title: *Adaptive Experimental Design with Bayesian Optimisation.*
- Mentored by A. Prof. Bryan Low Kian Hsiang, Director of Research, AI Singapore.
- Exploring the use of Bayesian inference, regression and optimisation techniques for the design of costly-to-evaluate experiments.

Full-Stack Developer, Project Generation, BrainHack 2021   Jun 2021
- Led a team of 5 to create a lifestyle app for the physical and mental well-being of the elderly, and to help with loneliness and daily inconvenience exacerbated by Covid-19.
- Aggregated 4 standalone features into a single application.
- Designed and created application architecture, database schema and RESTful APIs.
- Built with Flutter, Dart, Django, PostgreSQL, Heroku.

Research Member, ML Singapore Project Team   Feb 2021 – Apr 2021
Dept. of Computer Science, National University of Singapore
- Project title: *Transfer Learning of Convolutional Neural Network Models for Tourist Photograph Recognition.*
- Experimented with 5 different Convolutional Neural Network (CNN) models (e.g., Xception, InceptionV3) for landmark recognition from tourist photographs.
- Spearheaded and demonstrated the use of transfer-learning in identifying country-specific landmarks by adapting from generic image classifiers.
- Compared and contrasted the ease of transfer-learning between popular CNNs.
- Automated repeated supervised learning processes.
- Identified points of failure to reduce overfitting, increasing prediction accuracy by 30%.
- Proposed future research to reduce margin of error, identified potential in other fields.

Developer, Project NUStorage   Oct 2020 – Dec 2020
- Adapted an existing software to create a desktop application for managing inventory, transaction records and financial accounts.
- Automated the update process between related inventory and financial records.
- Designed and automated test cases to ensure correctness of software.
- Built with Java, JavaFX, Jackson.

Full-Stack Developer, Project OrbitAroundFood   May 2020 – July 2020
- Designed and created mobile app for NUS' food catalogue, with a functional rating and review system, integrated a peer-delivery system.
- Learnt and applied software engineering practices.
- Level of achievement: Apollo 11 (Advanced).
- Built with ReactNative, NodeJS, NoSQL, Python.

LEADERSHIP

Vice-Captain and Student Coach, NUS Varsity Fencing Team   Feb 2020 – June 2021
- Led the team (~50 fencers) in local and international competitions.
- Hosted international level invitational competitions.
- Coached new fencers and provided constant feedback to experienced ones.