Zhang Zhiyao

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in https://www.linkedin.com/in/zhang-zhiyao-bluebell-b5971b165/   🖥 https://github.com/zzybluebell

👤 Software Engineer & Sr. Research Assistant in NUS-IORA   ⊙ Singapore

📝 Career Objective

Open-minded individual programmer with a proven track record in the Software Engineering, Machine Learning, and Full-Stack related software implementation & development. Equipped with strong technical skills as well as good interpersonal skills, also with a growth mindset driving me to look forward to handling software engineering, machine learning data analytics, solution architect/engineer, product manager, and research & development positions so as to bring benefits to the organization.

🎓 EDUCATION

National University of Singapore (QS Ranking: 11)   Aug 2019 - Dec 2022

Computer Science & Second Major in Statistics with Honors, Bachelor of Computing (QS Subject Ranking: 4)   Singapore

- **Certificate of Recognition Winner in NUS School of Computing Student Awards** [HERE]
- Software Engineering
- Artificial Intelligence (Machine Learning)
- Statistical Learning

Nanyang Polytechnic, Singapore   Apr 2016 - Apr 2019

Electronic & Computer Engineering with Merit , Faculty of Engineering   Singapore

- Awarded in Rohde & Schwarz Gold Medal **Top** Graduate & Outstanding Project Work
- GPA: 4.0/4.0 (Achieved **Distinction** in 85% of modules)

🏆 HONORS & AWARDS

1st Runner-Up - Huawei Cloud Developer Competition APAC 2022, Huawei Cloud International [HERE]	Sept 2022
Grand Winner - Huawei Cloud Spark Hackathon 2022, Huawei Cloud International [HERE]	Apr 2022
World Finalist & Asia Regional Winner - Microsoft Imagine Cup 2022, Microsoft [HERE]	Mar 2022
Gold Award - Nasser Bin Hamad International Youth Creativity Award 2021, Kingdom of Bahrain [HERE]	Dec 2021
Second & Most Popular Award - Samsung Solve for Tomorrow 2021, Samsung Singapore [HERE]	Dec 2021
Winner - Venture Initiation Program@SoC 2021, National University of Singapore [HERE]	Oct 2021
Grand Winner - Microsoft Azure Hackathon 2021, Microsoft [HERE]	May 2021
World Finalist & Asia Regional Winner - Microsoft Imagine Cup 2021, Microsoft [HERE]	Mar 2021
Champion (including Two Company Sponsorship Award from SenseTime & iHIS) - Splash Award 2020, Singapore Computer Society [HERE]	Dec 2020
Gold Medal Award - Global Student Innovation Challenge, Taiwan, i - CREATe 2020 [HERE]	Sep 2020
Champion - Samsung Solve for Tomorrow 2020, Samsung Singapore [HERE]	Jul 2020
Champion - MLH Execute Hackathon 2020, Entrepreneurship Cell, Delhi Technological University [HERE]	Dec 2020
Sliver Medal Award (One & Best) - Tan Kah Kee Young Investors' Awards 2019, Tan Kah Kee Foundation [HERE]	Aug 2019
Gold Medal Award - Institution of Engineer Singapore Innovation Challenge for Community 2019, IES [HERE]	Apr 2019

💼 PROFESSIONAL EXPERIENCE

NUS - Institute of Operations Research and Analytics (IORA)   Apr 2022 - Present

Software Engineer & Senior Research Assistant   Singapore

- Development of edTech web-based application, by using react
- Development of Crew-Scheduling Android/IOS based application collaborated with Singapore Airline, by using react native
- Research work in data science and analytics

IDEMIA   May 2021 - Aug 2021

Full Stack Developer Intern

- Handled the project of In-Team Encryption Tool JavaFX-based
- Handled the research project of machine-learning-based Thumb Recognition

NUS - Singtel Cybersecurity Laboratory   Apr 2021 - Jul 2021

Undergraduate Research Assistant

- Assisted development in the state-of-art research project "**Threat Profiling Development**"

Pensees Pte Ltd (Pensees-ai)   Nov 2019 - Jan 2020

AI Algorithm Intern

- AI Camera parameters configuration
- Research work on backlight face recognition
- Dataset training on the face recognition within the dark light environment

Panasonic R&D Center Singapore   Feb 2018 - Oct 2018

Assistant Research Engineer Intern

- Handled Deep Learning Research project "Semantic Segmentation of Free Space" individually
- Designed in project "Development of Deep Learning-based Object Detection"
- Led the 5-intern students' group from Polytechnics
- Received the testimonial from the IP3D core team manager and engineers
- Acquired excellent research and developing skills in deep learning area

🗐 PROJECT EXPERIENCE

AvTant - Development of Assistant Auditory-Verbal Therapy based Speech Recognition and Graphical   Mar 2020 - Present
Feedback Correction with Gamification

Lead

- Targeted to Hearing-impaired Children
- Consisted of an application that provides attractive e-tutorial & practices, an application game "Jump-For-Fun" and a physical game called Cube-Hub
- Key features: Phonetic & speech recognition, engaging voice interactivity game, Mouth shape video recognition, data analytics web application development, etc

Phychant - Development of Physical Disability and Speech Difficulties Assistant   Jan 2020 - Present

Lead

- Targeted to a person with physical disability and speech difficulties (PDSD) such as Cerebral Palsy, Stroke, and Amyotrophic Lateral Sclerosis
- The application can help a person with PDSD to communicate with others more efficiently and productively
- The biggest feature in this APPLICATION is allowing users to respond with a gaze on his/her line of sight or choose two muscles on their body to control. This uses the deep learning technique to simplify the operation

Development of Deep Learning-based of Face Recognition   May 2018 - Jan 2019

Researcher & Developer

- Developed an algorithm based on Google CNN FaceNet to achieve face recognition
- Implemented a Web application "Attendacne+" for Nanyang Polytechnic core laboratory student attendance system
- Published the paper in ICIGP 2019

Development of Deep Learning-based of Object Detection & Semantic Segmentation tool of Free Space   Feb 2018 - Oct 2018

Assistant Developer Intern

- Intern Project in Panasonic R&D Center
- Assisted Build and present in a team to develop deep learning-based object detection by using Python and NumPy based on the Yolo-V3 platform
- Assisted develop an algorithm and building the perception for the autonomous car
- Created a dataset labeling tool based on Python and QT

🕒 RESEARCH EXPERIENCE

Multiplet Selection: A Practical Study of Multi-Faces Recognition for Student Attendance System   Aug 2018 - Apr 2019

Researcher

- Best Paper Presentation in ICIGP 2019
- Link: https://dl.acm.org/doi/10.1145/3313950.3313954
- This paper presents a new approach, Multiplet Selection, for multi-faces recognition and its application in student attendance system. Video: https://www.youtube.com/watch?v=cEEB2ycCjzE

⊕ SKILLS, OTHERS

- **Skills:** Java, OOP, React, React Native, Vue, Python, Numpy, Pandas, Tensorflow, Pytorch, ML, DL, JS/CSS/HTML, XML, Git, Ubuntu, R, SQL, C/C++, Adobe Photoshop, Adobe illustrator
- **Languages:** English: Full professional proficiency; Chinese: Native or bilingual proficiency
- **Interests:** Programming, Statistics, Hackathon, Qualitative Finance, Reading