

# Allen Hao

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Motivated and innovative software engineer with experience in the IT and Engineering industries, adept at back-end development. Master degree in IT with Distinction from The University of Melbourne, with a background in AI. Passionate about learning new technologies, enthusiastic about DevOps, Cloud, and dedicated to solving team pain points. Demonstrated expertise in working within an agile development environment and delivering projects on time.

## TECHNICAL SKILLS

**Software Development:** Python; Java; C++; PHP; SQL; HTML5; CSS3; JavaScript; MyBatis; C#; Agile methodologies; Trello; SpringBoot; SpringMVC; Django; .NET8; JUnit; PyTest; Android Studio; Data Structures and Algorithms;  
**DataBase:** SQL (MySQL, PostgreSQL); NoSQL (MongoDB, Cassandra, Neo4j); Fire Database;  
**Cloud & DevOps:** AWS; Docker; Kubernetes; GitHub;  
**AI:** Computer Vision; Pytorch; OpenCV; Tensorflow; U-Net; Machine Learning; Fine-tuning; Nature Language Process

## WORK EXPERIENCES

**Archa** Melbourne, Australia  
*A company provides Australia's best corporate credit cards and spend management solutions for businesses.*

**Software Engineer Intern** Feb 2023 – May 2023

- Developed back-end APIs using Django and RESTful frameworks to support the new functions in the company's application, website, and back-end management systems
- Familiarized with existing products and repository code, fixed over 300 warnings and outdated unit test errors, resulting in more robust and cleaner back-end logic
- Merged completed features into release and production branches efficiently, adhering to Git best practices and ensuring smooth deployment and integration
- Skills: **Python; Django; RESTful framework; Unit test; Git; API development**

**Espressif** Shanghai, China  
*A global leader in wireless communication, IoT, AI SoCs, and software solutions for a smarter, greener future.*

**Python Developer** Jan 2022 – Apr 2022

- Devised back-end logic for data analysis tools by writing Python scripts and processing large-scale chip test data in MongoDB, thereby obtaining statistical results and significantly accelerating data analysis efficiency
- Restructured the database and revised data processing logic, boosting data processing efficiency by about 10%
- Collaborated weekly with another department to confirm requirements and worked closely with one technical lead and two product leads to drive development efforts
- Skills: **Python; MongoDB; Linux; PyMongo; Jupyter Notebook**

## PROJECT EXPERIENCES

**Low-Carbon Life Web Platform** Oct 2023—Oct 2023  
*Developed a demo platform in FEIT Hackathon Festival for promoting environmental sustainability.*

- Developed secure RESTful APIs using Spring Boot, MyBatis, and JWT, which enhanced user authentication and interaction features, leading to improved platform security and engagement
- Integrated ChatGPT API with custom prompts for an AI-powered chat service on carbon reduction, providing an interactive and educational user experience
- Resolved CORS issues between front-end and back-end, ensuring seamless connectivity and reliable system performance
- Deployed the website to an AWS cloud server and did a presentation, record link: [UoM - Hackathon \(bobohao21.blogspot.com\)](https://uom-hackathon-bobohao21.blogspot.com)
- Skills: **Java; Spring Boot; MyBatis; MySQL; RESTful API; JWT; AWS**

**Monash Industry Experience Project** Mar 2022—Jun 2023  
*Built a website (Content Management System) for the client's company to increase business exposure and productivity.*

- Adhered to Agile methodology in the entire development process, probably taking on 70% of the technical feature development, which significantly supported the implementation of new website functionalities

- Designed and implemented a robust MySQL database schema, configured in CakePHP, with authority separation and permission management function to ensure secure, role-based access via account password login
- Devised a messaging module using CakePHP's built-in Email class to send email notifications to users upon subscription, and authored comprehensive user and technical documentation for the entire project
- Integrated the Calendly API to embed scheduling functionality into our website and utilized the Stripe API to implement a payment system, enabling customers to not only browse company information and services but also purchase e-Books directly
- Developed the website's back-end to facilitate CRUD operations on resources, allowing client administrators to log in and manage user information, as well as update site content including text, videos, and images
- Skills: **CakePHP; MySQL; cPanel; Scrum Agile; Git**

## EDUCATION

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### UNIVERSITY OF MELBOURNE

Melbourne, Australia

#### **Master of Information Technology and Engineering – Artificial Intelligence**

Jul 2022 – Jun 2024

- Key Study Areas: Machine Learning; AI Planning for Autonomy; Computer Vision; Distributed System; Algorithms and Complexity; Natural Language Processing
- Honors: **The Dean's Honors List for 2023; Melbourne Graduate Grant; Melbourne Welcome Grant**

### MONASH UNIVERSITY

Melbourne, Australia

#### **Bachelor of Information Technology – Software Development**

Jul 2019 – Jun 2022

- Key Study Areas: C++; Object-Oriented Design and Implementation; Advanced Database Design; Android Mobile Application Development; Software Development and Management; Design patterns and principles
- Honors: **International Study Grant; Winter Vacation Research Scholarship**

## PUBLICATION

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- Zixin Hao, [Comparative Analysis of Transformer Integration in U-net Networks for Enhanced Medical Image Segmentation](#), 2024 2nd International Conference on Computer, Machine Learning and Artificial Intelligence (CMLAI 2024)-Published

## ADDITION

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- **Certificates:**  
MongoDB Basic Completion Certification; Microsoft Office Software Master;  
**AWS Cloud Practitioner;** **AWS AI Practitioner** (Early Adopter)
- **Activities:**  
**Bronze medal for the Kaggle Competition** (UBC Ovarian Cancer Subtype Classification and Outlier Detection);  
“Grand Challenge” digital project in Unimelb;  
Monash University Intramural Programming Camp;  
Overseas Online Research supervised by Prof. Alex Rogers at the University of Oxford;  
Monash Winter Vacation Research Project;  
Totally-Looks-Like Challenge Kaggle Competition (Top 10%)
- **Interests:** Badminton; Travel; Learn new techs
- **GitHub Link:** <https://github.com/haozixin>