

# BENSON ANG WEI KIAT

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## SUMMARY

Motivated Computer Science graduate with a strong foundation in software development and AI. Proficient in Python and Java, with hands-on experience building full-stack applications using Spring Boot and React, as well as developing machine learning and AI projects. Eager to learn, adapt quickly, and contribute to collaborative, fast-paced environments.

## EDUCATION

### National University of Singapore

Aug 2022 - May 2026

Bachelor of Computing in Computer Science, GPA: 4.71/5.00

- Dean's List: AY2024/2025 Semester 2
- Certificate of Distinction in Artificial Intelligence Focus Area
- Certificate of Distinction in Database Systems Focus Area

## WORK EXPERIENCE

### Integro Technologies, Product Team (Singapore), Software Engineer

May 2025 - Aug 2025

- Implemented dynamic search functionality for banking applications leveraging JavaScript frontend components and Spring REST controllers with JDBC queries for real-time data retrieval. Improved user experience by cutting down number of clicks to search for customers and applications, optimised with infinite scrolling pagination for a seamless search experience.
- Integrated Hazelcast Jet within Spring Boot to load customer data from OracleDB into distributed in-memory maps, enabling low-latency querying.
- Utilised Debezium JDBC connector to stream database changes into Hazelcast for near real-time data updates.
- Collaborated in an agile team using SVN and Jira for version control and task management.

### Home Team Science and Technology Agency, Q Team (Singapore), Cyber AI Analyst

May 2024 - Aug 2024

- Constructed automated data processing pipelines using Python and Selenium, extracting 10,000+ data points weekly for machine learning applications.
- Integrated OCR systems by combining multiple libraries (PyTesseract, EasyOCR) with facial recognition technologies to enhance document and identity processing.
- Built customised chat bots with LLaMA models through fine tuning, enhancing internal knowledge retrieval and user interaction workflows.

## TECHNICAL SKILLS

Programming Languages: Java | JavaScript | Python | SQL | C++ | HTML | CSS

Libraries/Frameworks: Spring Boot | Flask | React | Material UI | Sci-kit Learn | PyTorch

Tools: Git | SVN | Jira | Docker | PostgreSQL | OracleDB | hugging face | Postman

## PROJECTS

### Bowling Pose Estimation (FYP), AI/ML Engineer

Aug 2025 - Present

- Applied JIRA Scrum methodology while collaborating with sport scientists from the High Performance Sports Institute (HPSI) to design computer vision solutions for sports performance analysis.
- Engineered a pose estimation pipeline to extract biomechanical features (e.g., step events, swing phases) from bowling sequences.
- Leveraged SynthPose to generate 52 key points and developed custom algorithms to transform raw keypoint data into high-level motion events for sports analysis.
- Performed comparative analysis against 3D motion capture systems to evaluate model accuracy, identifying optimal key points and refining event detection methods for boosted biomechanical validity.

### Tuition Management Application, Tech Lead

Mar 2025 - Aug 2025

- Led a team of 5 developers to build a full-stack SAAS tuition management system, streamlining scheduling, trainer management, and invoicing.
- Implemented responsive UI with MUI and optimised data fetching using TanStack Query for improved performance.
- Designed robust backend services with Hibernate & JPA, enabling seamless database interactions and reducing query latency.
- Enhanced operational efficiency with features such as relief class management and automated invoicing.

### Sarcasm Detection in News Headlines, AI/ML Engineer

Jan 2025 - Mar 2025

- Collected and annotated 28K+ headlines dataset with inter-annotator agreement for cross-cultural sarcasm detection.
- Designed targeted augmentation strategies incorporating Singlish SMS corpus and profanity datasets to capture Singapore-specific linguistic patterns; increased training dataset size by 62% through synthetic headline generation.
- Fine-tuned BERT models using transfer learning, contrastive learning, and synthetic data augmentation with GPT-4o.
- Placed second among 20+ teams in 26th SoC Term Project Showcase.

### DSTA BrainHack TIL-AI, AI/ML Engineer

Jun 2024

- Competed in BrainHack's TIL-AI, tackling AI challenges including Automatic Speech Recognition, Object Detection, and Question Answering.
- Collaborated in a team to optimise BERT, YOLO, and Whisper for downstream tasks, boosting model accuracy beyond 90% and leading team to semi-finals of DSTA BrainHack TIL-AI.