

# Ze Yan Liow

Software Engineer

128 Rockfield Court, Dundalk, Co. Louth, A91 A5X0, Ireland.

+353 838742032 | [bryan.liow.zy@gmail.com](mailto:bryan.liow.zy@gmail.com) | [Portfolio](#)

<https://www.linkedin.com/in/zeyanliow>

## PROFILE

Experienced Software Engineer, well-versed in full-stack technologies and eager to stay at the forefront of tech trends. Skilled in architecting distributed systems and implementing cloud computing solutions that enhance application performance and security. Eager to bring analytical rigour and technical expertise to a vibrant team poised to deliver advanced technology solutions.

## AREAS OF EXPERTISE

|                                     |                        |                                |
|-------------------------------------|------------------------|--------------------------------|
| Database System                     | Internet of Things     | Web Development                |
| Object-oriented Programming         | Functional Programming | Cloud Solutions                |
| Networking                          | Software Testing       | Mobile App Development         |
| Heuristic & Artificial Intelligence | Distributed Systems    | Data Visualisation & Analytics |
| Agile Methodology                   | Computer Security      | API Architecture               |

## TECHNICAL PROFICIENCIES

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|------------------------------|--|
| <b>Programming Languages</b> | Python, C++, Java, C, PHP, TypeScript, SQL, HTML, CSS, Kotlin, R, Haskell. |
| <b>Frameworks:</b>           | React.js, Node.js, Laravel, Yii, Docker, jQuery, Bootstrap, Tailwind CSS   |
| <b>Databases:</b>            | MySQL, PostgreSQL, MongoDB   |
| <b>Developer Tools:</b>      | Linux, Git, AWS, Figma, Postman, SwaggerHub                                |
| <b>Certification:</b>        | <a href="#">AWS Certified Cloud Practitioner</a>                           |

## WORK EXPERIENCES

### Software Engineer

OCT 2021 – OCT 2023

**Climote** | Dundalk, Co. Louth, Ireland

Led advanced remote heating app development, boosting efficiency and user engagement. Key contributor to R&D for data visualization and algorithms, achieving 20% energy savings. Enhanced software and architected resilient cloud solutions.

- Engineered remote heating control apps with Yii and Laravel, boosting performance and user experience.
- Implemented status monitor, speeding issue detection by 95% and maintaining Climote system health.
- Collaborated on launching data visualisation tools, enhancing analytics for 2000+ smart immersion events.
- Devised robust API JSON structure, championed intuitive UI design, and created comprehensive app documentation.
- Enhanced jQuery SPA functionality with strategic upgrades and thorough bug remediation.

### Software Engineer Intern

MAR 2020 – JUN 2020

**Flogas** | Drogheda, Co. Louth, Ireland

Crafted a mobile app prototype using Power Apps for innovative gas level tracking, enhancing monitoring efficiency, and delivered IT support for technical resolutions and help desk assistance.

- Catalysed 30% of digital transformation, boosting operational efficiency.
- Established secure VPN access for employees during COVID-19 to ensure uninterrupted business operations.

## PROJECTS

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### **Triptalk** | *Personal Project*

- Enhanced user experience by designing responsive UI and leveraging Next.js and Tailwind CSS.
- Improved backend efficiency by managing data with MySQL.
- Orchestrated AWS deployment, achieving high uptime with EC2, RDS, and scalable S3 storage.
- Minimised risk of unauthorised access and strengthened application security through Laravel Passport.

### **Aquality 2.0** | *DkIT Final Year Project*

- Conducted data-driven environmental analysis in coordination with scientists.
- Enabled AI-powered data analysis via RESTful APIs for actionable insights.
- Crafted IoT system with advanced telemetry, transforming data collection from manual checks per year to automated updates every minute.
- Deployed Scrum methodologies, maintaining 95% project deliverables on schedule during COVID-19.
- Engineered innovative React Native app to monitor environmental conditions in real-time.

### **Doctor Book** | *DkIT Third Year Project*

- Developed PHP-based GP appointment system with MVC architecture.
- Optimised user experience by ensuring custom role-specific access framework.
- Boosted system performance through optimisation of SQL queries and improving data processing efficiency.
- Ensured data privacy and compliance through execution of security measures.

## EXTRACURRICULAR ACTIVITIES & INTERESTS

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- Participated in Computing Machinery Association for tech talks and networking.
- Boosted the Archery Club's online engagement as Webmaster.
- Represented as an International Student Ambassador at DkIT to nurture diversity.
- Showcased teamwork in university badminton and archery teams.

## EDUCATION

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### **BSc (Hons) in Computing in Software Development**

**SEP 2017 – JUN 2021**

**Dundalk Institute of Technology** | *Dundalk, Co. Louth, Ireland*

**Key Modules:** Object-Oriented Programming (OOP), Networking, Database Systems, Artificial Intelligence (AI), Software Testing, Data Science, Computer Security, Mobile Development, Functional Programming.

**Results:** Second Class Honours Grade 1

## SKILLS

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- Quickly grasp new information and self-study diverse programming languages and technologies.
- Skilled in troubleshooting, critical thinking, and solving complex issues effectively.
- Proven ability to take initiative and excel under pressure, ensuring timely delivery on strict deadlines.

### **Languages:**

English (Fluent), Mandarin (Native), Malay (Fluent), and Cantonese (Conversational).