

# Xiu Hong KOOI

## Software Engineer

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### Overview

Backend Software Engineer with excellent programming and problem solving skills. I am passionate about leading development teams and shipping high quality software. I am a diligent team player, fast learner and is willing to work with different technology stacks in order to acquire more knowledge in software engineering. I pay very high attention to detail and do not tolerate sloppy work from both myself or my teammates.

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### Experience

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#### AirAsia / Software Engineer

AUGUST 2019 - PRESENT, Kuala Lumpur, Malaysia

Lead Engineer who led the development of our new online checkout and booking system. I own the codebase, development and deployment stages, conducting strict code review and quality control. Previously I worked on our customer support chatbot AVA and implemented core features like flight refunds and itinerary sending. I enforce software engineering best practices within my teams such as automation, in-depth documentation and git branching strategies.

#### Keysight Technologies / Data Engineer Intern

JUNE 2018 - SEPT 2018, Penang, Malaysia

Tasked with designing and conducting POC on modernising our data infrastructure using technologies like Apache Spark, Hadoop, Splunk, etc. I extended an existing legacy Java based parser that saves a proprietary data file to a SQL database in order to switch to a NoSQL based design. By the end of the internship I provided valuable insights to the team in order to continue work on the modernisation.

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### Education

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#### University of Cambridge / MPhil Advanced Computer Science

OCTOBER 2020 - JUNE 2021, Cambridge, United Kingdom

Master's degree in Advanced Computer Science, specialising in Formal Methods

#### University of Newcastle upon Tyne / BSc Computer Science

SEPT 2016 - JUNE 2019, Newcastle upon Tyne, United Kingdom

83% First-Class Honours, 2x British Computing Society Academic Awards winner, Endowed prize 2017. Highest grade in class of 2019.

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## Skills

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Highly skilled in Backend Web Development in multiple tech stacks including Java Spring Boot, Python Flask and NodeJS express. Language agnostic and capable of learning a new language for a task.

Highly skilled in Cloud Technologies and DevOps using Google Cloud Platform, Docker and Kubernetes. Experienced in using Git, building CI/CD pipelines and automated QA.

Good working knowledge in different Database Systems in both RDBMS, NoSQL as well as in-memory database such as MySQL, MongoDB, Firestore and Redis.

Working experience in system design at both an architectural level and microservice level. Fluent in software development using the microservice architecture.

Working experience in Agile Software Development methodologies using framework like Scrum. Capable in managing and assigning development task to ensure development happens smoothly

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## Side Projects

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Genid - Universally random ID generator system. This is a CLI application that generates random numeric or alphanumeric ids and ensures no collision. The system guarantees no conflicting Ids are generated using Redis and the application is written in Go.

Home Automation System – A REST API that controls lights and wall outlets in my house. This is a microservice that can be utilised by websites or mobile apps to control the lighting and other electronic appliances.

Term Rewriting System – My undergraduate dissertation was developing a term rewriting engine that was implemented in a GUI. The project looks to solve the problem that most rewriting systems have of being too complicated for novice users. The application was written in Java and Swing GUI.

NE Weather – A weather app that gives user activities suggestions based on the weather condition and air quality. This was developed as part of my undergraduate study where I was a lead engineer on a team of 10. The app was written for Android using the Java Android SDK and utilising an API that collects data using sensors.

QcK Budget – An iOS budget tracking app that lets users log their income and expenses easily. Users can set recurring transactions and scan barcodes to quickly get the price of an item. It was built using Xamarin.iOS initially then changed to Ionic for cross platform compatibility.

Anomify.com – An anonymous messaging website that lets users send and receive anonymous messages from other users. This was one of my earliest projects where I got introduced to the field of web development. The tech stack is simple using only PHP and MySQL