Raka Alifiar Gunarto

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Work Experience

EnQuest PLC ⚲   Aberdeen, UK
Application Engineer [Copilot] [Gen AI] [Azure]   January 2025 - Now

- Acted as the sole software engineer embedded within an operations-focused organisation, taking end-to-end ownership of internal engineering initiatives in an environment with minimal existing technical infrastructure.
- Researched deep learning techniques for oil well time-series modelling to support operational decision-making and production optimisation.
- Integrated Microsoft Copilot with the on-prem file shares for the wells team, enabling a chat experience with gigabytes of reports dating back to 1980.
- Improved efficiency of the legal team by implementing a custom RAG chat solution with Azure AI Search and Azure OpenAI on top of their legal database. Information discovery times improved by at least 4x.

Microsoft UK - Metaswitch Acquisition (Azure for Operators) ⚲   Edinburgh, UK
Software Engineer [Azure / Cloud] [C#] [Java] [Linux]   November 2023 - September 2024

- Tested complex upgrade paths for a key product and led a live on-site upgrade for a major client.
- Quickly adapted to a new project, resolving critical bugs under tight deadlines to meet promised deliverables before release.
- Designed and implemented an in-place OS upgrade process for bespoke product VMs, transitioning from CentOS 7 to RHEL 8, ensuring continued security updates and preserving deployment state for low friction.
- Identified and prevented a product release containing critically vulnerable dependencies, enhancing automated detection processes in response to improve product security.
- Improved team efficiency by automating manual processes such as credential rotations, saving hours and reducing mistake potential from the manual process.

Microsoft UK - Metaswitch Acquisition (Azure for Operators) ⚲   Edinburgh, UK
Software Engineer Intern [CI] [AzureDevOps] [Jira] [Python]   June 2022 - August 2022

- Coordinated division-wide migration of projects from Jira to AzDO preserving work history, while ensuring dev teams were not blocked.
- Improved automated package/library auditing and reporting in Git pipeline, allowing us to meet our SLA better by providing immediate notice and tracking of vulnerable dependencies.

Phlashweb (PhillAsh Ltd) ⚲   Remote, UK
Technical Architect / Software Engineer (Part-Time) [MongoDB] [NodeJS] [DevOps] [Agile]   June 2020 - June 2022

- Lead a dev team on a client project for the company 'Orbit'. Created a website / webapp for people to apply for 'Orbit Better Days Fund'.
- Handled DevOps, automated CI/CD workflows for deployment to staging / production.
- Implemented Agile software development practices. Used Gitflow workflow and Jira to ensure the team was working efficiently.

- **Leadership Roles:** Vice Head of PPIUK (Indonesian Students Organisation UK) Data and Digital Technologies Department (2020 - 2022), Leading the PPIUK central database and member portal project (2020 - 2022)

Education

University of Leeds   Leeds, UK
MEng, BSc Computer Science   September 2019 - June 2023

- Graduated with First Class Honours
- Teaching Assistant in 4th year
- BIT94 Awardee

Notable Modules and Coursework

- Web Application Development - Wrote an Instagram clone with Python using the Flask framework
- Computer Graphics - Implemented a mini game engine in C++
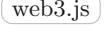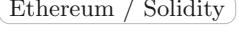- BSc Project - Implemented VGA graphics for the xv6 OS

Awards And Achievements

- **BT Hackathon 2019** - 1st Place ⚲
- **RHB Hackathon 2021** - 4th Place, Best In Category Special Award, out of hundreds of professional participants ⚲
- **XHacks 2021** - 2nd Place ⚲
- **Malaysian Computing Olympiad 2018** - Silver Medal ⚲

Skills

- **Programming Languages: Javascript**, **C/C++**, **C#**, **Python**, **Java**
- **Tools and Frameworks:** Git, MongoDB, SQL, ReactJS, NodeJS, HTML/CSS, React Native, Systems Administration, DevOps, Jira

Projects

- **PPIUK - Member Portal & Central Database System** (MERN Stack) (DevOps) (Open Source)
  - Started and lead the project for PPIUK (Indonesian Students Organisation UK).
  - Maintaining the project, regularly updating and implementing features.
  - Implemented automated CI/CD workflows to automatically deploy to staging / production. Handling server system administration.
- **RHB Hackathon 2021 - Decentralised Credit Bureau** (ReactJS) (web3.js) (Ethereum / Solidity) (Smart Contracts)
  - Financial institutions can share and validate credit histories easily.
  - Data is stored on private blockchain, whereby the financial institutions are the validating nodes.
  - EVM smart contracts handle all data transactions.
- **Community Project - River Water Level Alerts** (MERN Stack) (Embedded Systems) (Open Source)
  - A small community project that alerts local subscribers if a river rises above a threshold.
- **Contactless Attendance System** (NodeJS) (SQL) (Embedded Systems)
  - Used for a year in Kuala Lumpur Alice Smith School for study leave attendance tracking.
  - Designed and programmed the hardware for the scanners, using ESP8266 micro-controller.
  - Created a webapp for data display and manual attendance, with NodeJS and an SQL database backend.
  - Integrated with school AD servers for authentication, allowing for a seamless user experience.
- **PVTx Calculator** (Python) (Django) ⚲
  - The tool calculates the brine density of an aqueous binary solution based on S. Mao, Z. Duan / J. Chem. Thermodynamics 40 (2008) 1046–1063, used in critical calculations by an oil & gas company (see link).
- **A Level EPQ - Evolutionary Neural Networks** (C#) (Neural Networks)
  - A basic implementation of evolutionary neural networks, using Unity C# to visualise the agents represented as cars learning to navigate a racetrack.