

Juan-luke Klopper

Software Engineer

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Summary

With a background as a university-educated Software Engineer and a former mathematics Olympiad district winner, I specialize in logical problem-solving and creative solution development. My dedication to lifelong learning fuels my exploration of various Computer Science domains, equipping me to provide valuable contributions to innovative projects.

Skills

- DevOps Practices
- Problem-solving
- Implementing CI/CD pipelines
- Linux System Administration
- Positive attitude
- Passion for learning
- Adaptability
- Self motivation
- Debugging
- Git/Github
- Debugging and Troubleshooting
- Infrastructure as Code
- Integrating LLM into processes
- Relational databases
- JavaScript
- Rust
- Python
- C#
- HTML/CSS
- SQL
- Yaml/Toml
- API Integration
- Svelte
- Leptos
- HTMX
- Discord and Telegram bots
- Blockchain Technologies
- Writing Smart contracts

Experience

MARCH 2022 - PRESENT

Stake or Die, Remote (US based) - *Junior Software Engineer*

- Developed blockchain and backend applications, contributing as part of a development team
- Designed and implemented a CLI tool automating infrastructure setup, managing Linux servers hosting blockchain clients.
- Contributed to the internal Research & Development team by researching emerging technologies, creating documentation, and building prototype applications.
- Created Telegram and Discord bots for API interaction and real-time anomaly detection, streamlining information flow.
- Collaborated with stakeholders and clients, ensuring transparent communication, progress updates, and feedback integration.
- Participated in weekly meetings with key members of a multimillion-dollar foundation, contributing to strategic discussions.
- Played a pivotal role in running a public testnet and facilitating the initial launch of multiple blockchains.

MARCH 2023 - AUGUST 2023

NextNet, Remote (Israel Based) - *DevOps Engineer*

- Managed a diverse range of servers and hosted HTTPS endpoints, ensuring seamless functionality and accessibility.
- Integrated CI/CD tooling into the workflow, enhancing deployment processes and efficiency.
- Elevated Infrastructure as Code (IaC) practices by developing Ansible scripts for streamlined server management.
- Implemented monitoring systems using Grafana, enabling proactive issue identification and resolution.
- Orchestrated multiple RPC endpoints for various blockchains, optimizing data retrieval and processing.
- Collaborated with various cloud providers, including AWS, GCP, DO, and OVHcloud, adapting to diverse environments.

Education

North West University, South Africa - *Bachelors of Science in Information Technology*

Notable Courses:

- Data Structures and Algorithms
- Databases and Advanced Databases
- System Analysis and Design
- Computer Networks
- Object-Oriented Programming
- Operating Systems
- Discrete mathematics

Personal Projects

Emily, the email Assistant

a dynamic SvelteKit web application powered by OpenAI. It streamlines the process of creating professional business emails through a user-friendly interface. Upon entering the desired email content, the application sends a Post request to an API. This API triggers server-side JavaScript to interact with OpenAI's API for prompt construction and response retrieval, ultimately presenting the response on the website. Additionally, a Dockerfile and GitHub action automate image creation and deployment to DockerHub, facilitating hosting on an Akash server.

SmartFlow Irrigation System

I designed, built, and programmed an automated IoT irrigation system for Querencia Organic Snails SA. This system, Internally named SmartFlow, is a blend of hardware and software components. At its core, a Raspberry Pi 4 acts as a HomeAssistant server, interfacing with Sonoff WiFi switches and a custom data logger device.

SmartFlow boasts a user-friendly dashboard that efficiently manages the operation of two borehole pumps, four solenoids, and a float switch. Ensuring a consistent water supply for the farm's tanks and regulating precise irrigation times and durations for the crops. Furthermore, it actively collects critical crop data. The system's unique feature allows remote updates via over-the-air (OTA) capabilities.

The specialized data logger captures essential metrics including temperature, humidity, and soil moisture levels. Rapidly prototyped using an Arduino Uno and later upgraded to an ESP32 microcontroller, this device augments SmartFlow's data collection prowess.

Hobbies and Interests

- Astronomy, Stargazing and learning about the cosmos.
- Blogging, Sharing my learning experiences and technological adventures.
- Animation aficionado, appreciating the art of storytelling through visuals
- YouTube Knowledge Hunt: Exploring entertaining yet informative YouTube videos to expand my understanding.
- Physical Activities: Finding solace in nature through hiking and embracing outdoor activities.