LYLE OKOTH

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Software Engineer (backend)

Backend engineer with a background in robotics and two years of experience building and deploying highly scalable and highly available microservices. Enjoys solving problems that involve algorithmic design and cloud computing. Domain expert in building applications for the robotics industry using Robot Operating System, Python, C++, Flask, Django and Amazon Web Services. A leader in identifying opportunities for applications development.

Professional Experience

Oryks Robotics | Software Engineer
02/2021 - Present
Part Time

Skills | Responsibilities

- Develop drivers for reading information from sensors such as lidars, wheel encoders and cameras using Arduino based microcontrollers and Raspberry Pi's.
- Design and simulate components using Solidworks.
- Develop perception and navigation algorithms for indoor navigation using the Robot Operating System.
- Model and simulate robotic arms, mobile robots using the Robot Operating system, Gazebo and Rviz.
- Containerize C++ and Python applications built with the Robot Operating system using docker.
- Deploy containerized applications using docker-compose, git, github, github actions, CodePipeline.
- Provision EK8 clusters, ECS clusters, S3 on AWS.

Accomplishments | Achievements

- **Deployed an indoor Autonomous Mobile Robot** | Designed, built and deployed a 3D printable autonomous mobile robot prototype for use in indoor cleaning.

Professional Education

- **B.Sc. In Mechatronics Engineering**, 2016 – 2019 | Jommo Kenyatta University of Agriculture and Technology, Kenya

Languages

- English C_1
- Swahili C_2

Skills

- **Programming Languages**: Python | C++ | C
- **Server-side frameworks**: Flask | Django
- **Other Frameworks**: Robot Operating System
- **Cloud**: AWS EC2 | AWS S3 | AWS ECS | AWS EK8 | AWS ECR | AWS CloudFormation
- **Logging**: ELK stack
- **Operating Systems**: Linux | Windows
- **Databases and ORM**: Postgres | MongoDB | SQL Alchemy
- **Unit testing**: Pytest | Unittest
- **CI/CD and Versioning**: git | github | docker | docker-compose | github actions | AWS CodeBuild | AWS CodeDeploy | AWS CodePipeline

Training | Courses | Certifications

- **ALX** | Software Engineering Bootcamp, 2022 - 2023