Kobus van Schoor

Software & Electronics Engineering

- Cape Town, South Africa
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- https://kobusvs.co.za/
- Github
- LinkedIn

SKILLS

Backend Development
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Frontend Development
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Security
●●●●○

Automation
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AI & Machine Learning
●●●●○

Electronic Design
●●●○○

TOOLING

Linux
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Python
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Django
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Tensorflow
●●●○○

Golang
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C, C++
●●●●○

Kubernetes
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AWS
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AWARDS

Entelect Challenge 2022: 1st place
Entelect Software

Placed 1st in the Entelect Challenge, a programming competition where you design an AI bot to compete against other players in an RTS game.

Cloudflight Coding Contest Top-35 Worldwide
Cloudflight

Placed 32nd internationally in the 34th Cloudflight Coding Contest, a coding competition where you have 4 hours to solve problems of varying difficulty.

Entelect Challenge 2020 Finalist
Entelect Software

Finalist in the Entelect Challenge, a programming competition where you design an AI bot to compete against other players. Placed 4th in the finals.

REFERENCES

Neels van Rooyen
Team Lead

Worked under the supervision of Neels during 2018 while he was the UP CS TechTeam lead
- nexusdk@gmail.com

Prof. Nelishia Pillay
Head of Department

Served as the Head of Department for the Department of Computer Science at UP from 2018-2020. I reported directly to her in this time.
- nelishia.pillay@up.ac.za

I am a passionate engineer who loves working on electronics, programming, and building intelligent systems. I'm always willing to learn something new, and I enjoy being thrown into the deep end of a challenging project. My goal in life is finding new ways to help people through technology. I'm an exceptionally hard worker and always try to improve the environment I work in.

EDUCATION

BEng. Computer Engineering
University of Pretoria (2017 - 2021)
90% mark for my final-year project, an EMG-controlled hand exoskeleton to assist people with hand paralysis

WORK EXPERIENCE

Tech Lead: Edge team *(Nov 2022 - Present)*
DataProphet (Nov 2022 - Present)

Tech Lead of the Edge team, responsible for maintaining and developing the software stack running on industrial computers. These computers ingested data from a wide range of manufacturing equipment that was streamed to the cloud in real-time. The software operated in highly sensitive and critical environments, and had strict security requirements.

- Redesigned and implemented a new release process for the team which significantly reduced pain points and integration with third-parties.
- Headed and implemented the fleet upgrade project, in which a 130+ Edge devices were upgraded several major Ubuntu versions. Project was a resounding success and completed ahead of schedule.
- Implemented several automation and quality-of-life projects that increased developer productivity and decreased deployment time significantly.

🔗 https://dataprophet.com/

DevOps Engineer & Developer
Momentum Investments (Jan 2022 - Oct 2022)

Worked as a DevOps Engineer, mainly tasked with developing in-house tools to aid a large development team spread over 100+ projects.

- (Python, Django, Docker) Architected and developed an automated vulnerability scanner and web frontend which automatically discovers, catalogues and scans Docker containers for security vulnerabilities and secrets. The project was integrated as part of the SDLC and was used as a core indicator of the infrastructure's overall security.
- (Python, Flask, Terraform) Took over the development of one of the core internal tools used to deploy projects to AWS. The tool allowed developers to maintain their own AWS infrastructure, in a standardized and secure manner.
- (EKS, Terraform) Initiated, set up and deployed various projects which helped reduce technical debt, increase security and eased development using best practices for the entire Investments development team (static code analysis, automated dependency updates, knowledge sharing platforms, hardened base Docker images).
- Performed setup and maintenance of both AWS (EKS, EC2, Cognito, S3, SSM, Route 53) and on-premises Linux infrastructure

Team Lead: Developer and Linux Systems Administrator
University of Pretoria (Jan 2018 - Dec 2021)

Worked as a back- and front-end developer and systems administrator for the Department of Computer Science. Working in a small team, we managed and developed the infrastructure that several critical services in the department operated on. My responsibilities included the following:

- (Python, Django) Designed and developed from the ground up a new automarker and student website to replace the aging existing websites. Also oversaw the successful migration from the old websites/infrastructure
- (Linux, Containers) Architected and set up the MITC high-performance cluster which is used by post-graduate students to perform research on big-data machine learning applications
- (Linux) Administration of several critical services for the Department of Computer Science including LDAP and Kerberos central authentication, course websites, auto-marker facilities and websites for research groups
- (Linux) Administration of several hundred lab computers running Linux with central LDAP authentication and home folder hosting for use by students

PROJECTS

EMG-controlled hand exoskeleton
Hand exoskeleton to assist people with hand paralysis

My final-year engineering project was to build a hand exoskeleton controlled using EMG signals (signals emitted while you contract your muscles) which uses machine-learning to allow a person affected by hand paralysis to perform 5 gripping actions.

🔗 https://www.youtube.com/watch?v=8Nla6EqSfjQ

CVE Hunter
Automated vulnerability scanner

Developed an automated vulnerability scanner for Momentum Investments that automatically discovers, scans and then monitors internally built docker containers for vulnerabilities. Also has a web frontend and software bill-of-materials tracking.

Dotgit
Linux personal configuration management software

Lead developer and maintainer of dotgit, a comprehensive dotfiles (configuration files) manager which allows you to store and organize your dotfiles on multiple machines. Active user base with a completely automated CI/CD pipeline. First developed in bash and now currently in Python.

🔗 https://github.com/kobus-v-schoor/dotgit

Baker's Paradise
E-commerce website for baking goods and packaging business

Developed an e-commerce website from the ground up in Django for a baking goods and packaging supplier expanding into online sales and deliveries.

🔗 https://www.bakersparadise.co.za/