Kobus van Schoor

Software Engineer and Systems Administrator

I am a developer who loves all things programming and Linux. I am passionate about open-source software, electronics and automation.

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in kobus-van-schoor

SKILLS

Linux
Experienced in Linux systems administration, security and maintenance. Very comfortable with the command-line and multiple years of experience with Debian and its derivatives in a systems-administration environment. Familiar with both VM (Qemu) and container-based (LXC, LXD) hypervisors

Python
Experienced using Python for AI, web development and general-purpose programming. Skilled with automated test and deployment environments.

C++
Well-versed in using C++ as an OOP-language with templating and automated testing. Used for general-purpose development as well as AI.

Keras, Tensorflow and Sci-kit Learn
Have used various machine-learning frameworks such as Tensorflow, Keras and scikit-learn in a personal capacity

Bash
Experienced in using Bash to write general-purpose scripts for systems administration.

Django
Developed multiple websites in Django including a system to deploy jobs to a HPC cluster

Ansible
Experience using Ansible to automate DevOps in both a production environment as well as for personal use

3D Printing and CAD
Designed and built my own 3D printer which I often times use for DIY projects. Experienced in using FreeCAD to do part design

AWARDS

Cloudflight Coding Contest Top-35
Cloudflight

October 2020

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

September 2019

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

WORK EXPERIENCE

Department of Computer Science, University of Pretoria
Systems administrator and full-stack developer

(January 2018 - Present)

While studying at the University of Pretoria I also worked as a systems administrator and full-stack developer 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:

- 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
- Designed the architecture and set up the MIT high-performance cluster which is used by post-graduate students to perform research on big-data machine learning applications
- Administrated several hundred lab computers running Linux with central LDAP authentication and home folder hosting for use by students
- Maintained the main CS website as well as the auto-marker assignments website

PROJECTS

E-commerce website for baking goods and packaging business
https://www.bakersparadise.co.za/

(December 2020 - February 2021)

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

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

(December 2016 - Present)

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.

Self-designed 3D Printer
https://github.com/kobus-v-schoor/printer

(January 2019 - August 2019)

Designed, printed and built my own DIY 3D printer which I actively use for DIY projects.

MITC high-performance cluster

(April 2018 - Present)

Designed the architecture and set up the MITC high-performance cluster for the Department of Computer Science at the University of Pretoria which is used by post-graduate students to perform research on big-data machine learning applications

Strategy Builder
https://www.mql5.com/en/market/product/15328

(April 2016 - Present)

Developed proprietary Forex and commodity trading software to automate trading strategies. Currently actively used to manage funds.

Cluedo AI
https://github.com/kobus-v-schoor/cluedo-ai

(September 2019 - October 2019)

Developed an AI to play the classic board-game Cluedo for a university project. Implemented path-finding, offensive and defensive strategies and also a comprehensive set of rules to quickly deduce the other player's cards

Homelab

(January 2020 - Present)

Maintaining a personal homelab on which several services are being maintained for personal use. All the services are managed using industry-standard methods (automated deployment using Ansible, microservices deployed on containers) and follow best-practices. The services include home-automation, backup solutions and data-science environments which are also in use by friends and family.