Kobus van Schoor

Computer Engineering Student

PROFILE

Address
Pretoria, South Africa

Website
https://kobusvs.co.za

Email Address
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Github
kobus-v-schoor

LinkedIn
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
October 2020
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
September 2019
Entelect Software

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

OBJECTIVE

I am a maker who is passionate about electronics, programming, and building intelligent systems. I want to make an impact by building things that can help other people and I'm always open to learning something new.

WORK EXPERIENCE

Department of Computer Science, University of Pretoria
Team Lead: Developer and Sysadmin Team
(January 2021 - Present)

Along with my previous duties (see below), I acted as team lead for the TechTeam. My responsibilities included the following:
- Identification of new team projects, decisions on project timelines and overseeing their development
- Code review of all major projects
- Developing a new user management portal and code auto-marking system (FitchFork) for the Department. Successfully implemented and migrated from legacy systems.
- Handling hardware procurement
- Training of new TechTeam staff

Department of Computer Science, University of Pretoria
Systems administrator and full-stack developer
(January 2018 - December 2020)

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

Designed and built a 3D Printer
https://kobusvs.co.za/blog/3d-printer/

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

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

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.

MITC high-performance cluster
https://kobusvs.co.za/blog/ha-cluster-no-magic/

Designed 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

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

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

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

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

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

Other Projects
https://kobusvs.co.za/tags/projects/

A more complete list of the projects I've worked on can be found on my personal website.