



Kobus van Schoor

Computer Engineering Student

PROFILE

Address
Pretoria, South Africa

Website
<https://kobusvs.co.za>

Email Address
v.schoor.kobus@gmail.com

Github
[kobus-v-schoor](https://github.com/kobus-v-schoor)

LinkedIn
[kobus-van-schoor](https://www.linkedin.com/in/kobus-van-schoor)

SKILLS

- Linux**
3+ years of experience with Linux systems administration and security in a mission-critical environment (Debian-based distributions)

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

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

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

Embedded Development
Have developed for STM, PIC and Arduino platforms. Some experience with Verilog and VHDL for FPGA development.
- Python**
Experienced using Python for AI, web development, and general-purpose programming in automated test and deployment environments.

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

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

3D Printing and CAD
Experienced in using FreeCAD to do part design for 3D printing. Successfully designed and printed complex multi-part systems.

Analog Circuit Design
Some experience in designing analog circuitry (mostly for University)

AWARDS

- 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 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

Team Lead: Full stack Developer and Linux Systems Administrator (January 2021 - Present)
Department of Computer Science, University of Pretoria

- 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 newly implemented 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

Full stack Developer and Linux Systems Administrator (January 2018 - December 2020)
Department of Computer Science, University of Pretoria

- While studying at the University of Pretoria I also worked as a full-stack 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:
- 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 MITC high-performance cluster which is used by post-graduate students to perform research on big-data machine learning applications
 - Administration of 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

- 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.
- 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.
- 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.
- Automated Forex trading software**
<https://www.mql5.com/en/market/product/15328>

Developed proprietary Forex and commodity trading software to automate trading strategies. Currently in active use.
- 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
- Homelab**

Built a homelab on which I maintain several services 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 used by family and friends.
- Other Projects**
<https://kobusvs.co.za/tags/projects/>

Some of the other projects I've worked on can be found on my personal website.