Jacobus Lock

Motivated, dynamic engineer and PhD student, seeking new challenges and work experience in my field while I complete my studies

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Education

2016 - Present   **PhD in Computer Science**, *University of Lincoln*, Lincoln, UK.
This project attempts to combine machine learning, human-machine interfacing and computer vision in a novel way to produce an indoor navigation system for the visually impaired that adapts to a user's usage patterns, skills and limitations. Project website: lcas.github.io/ActiVis

2014 - 2015   **Master of Mechatronic Engineering**, *Stellenbosch University*, Stellenbosch, South Africa.
This project successfully determined the pose accuracy of a drone in flight in the outdoors with computer vision and machine learning regression techniques. The resulting error covariance matrix was integrated into the drone's control model. Report available at: bit.ly/2wjp7q0

2010 - 2013   **Bachelor of Mechatronic Engineering**, *Stellenbosch University*, Stellenbosch, South Africa.

Projects

NFCPay.
Designed, built and implemented a cashless vending machine that allows a student to buy a product using QR code, NFC or student ID authentication and deployed a remote server that tracks and encrypts all transactions and communications.

EchoLocate.
Developing a geo-tracker app that listens to the environment for ultrasonic trigger cues and logs the geo-location once such a cue is detected.

PiLock.
Created a centralised lock control system where a user can control the status of a group of locks using their Android phone and uses a back-end server for authentication and user logging.

Technical Skills

Strong	Android (SDK and NDK), Java, C\C++, Python, Git, Matlab, Latex
Knowledgeable	Django, Kotlin, Bash, embedded programming

Languages

Afrikaans	Native
English	Native, raised in bilingual household
German	Basic, learning

Hobbies and Interests

Travelling, history, economics, hiking, reading, cooking.

References

Available upon request.