

Julien Nyambal

Education

- 2019 - **PhD in Computer Science (Machine Learning)**, Supervisor: **Dr. Richard Klein**, University of the Witwatersrand, Johannesburg, South Africa.
Present
- 2017 - 2018 **Master of Science in Computer Science (Machine Learning - Computer Vision)**, Supervisor: **Dr. Richard Klein**, University of the Witwatersrand, Johannesburg, South Africa.
- 2016 **Bachelor of Science (Honours) in Computer Science**, University of the Witwatersrand, Passed with Distinction, Johannesburg, South Africa.
- 2012 - 2014 **Bachelor of Science in Computer Science & Mathematics**, University of Zululand, Kwadlangezwa, South Africa.

Experience

- 04/2018 – **Software Developer**, *Retro Rabbit*, Johannesburg, South Africa.
Present
 - Joined a team developing a Machine Learning algorithm for an android app. My role is to use make the backend more efficient using various technologies like Docker.
- 02/2019 – **Part Time Lecturer**, *University of the Witwatersrand*, Johannesburg, South Africa.
Present
 - Introduction to Programming and Algorithms
- 06/2017 – **Teaching Assistant**, *University of Witwatersrand*, Johannesburg, South Africa.
04/2018
 - Marking assignments, tests, invigilations, tutoring, monitoring laboratory work
- 02/2013 – **Teaching Assistant**, *University of Zululand*, Kwadlangezwa, South Africa.
11/2014
 - Marking assignments, tutoring, monitoring laboratory work

Skills

- Languages Python(fluent), Golang (intermediate), Octave/Matlab, Java, Scala(basic), C++(basic), L^AT_EX, Shell/Bash (intermediate)
- Frameworks Caffe, Keras ,Tensorflow, Nvidia DiGITS, Git, Android Studio
- OS Ubuntu Linux(Preferred), Windows (intermediate), MacOS(basic)
- Others Docker, AWS(ECS, EC2), Kubernetes(basic), Hadoop(basic), Spark(basic)

Projects

SmartDrive, *Android SDK, Java*.

SmartDrive has been designed to monitor the usage of the mobile phone while driving a car. SmartDrive blocks incoming SMSs and calls whilst the user is driving. SmartDrive has been built for Android devices.

Automated Parking Space Detection, *Python, Caffe (GPU), nvidia DiGits*.

Developed an Automated Parking Space Detection using some Computer Vision and Machine Learning techniques. I have used opencv with Python to predict the occupancy of some parking spot given a parking spot. I trained my dataset using Nvidia Digits under Caffe.

Automated Parking Space Detection, *Python, Keras, Octave/Matlab, Scikit-learn.*

Improving the Honours project for automatic detection and comparison between Support Vector Machines and Convolutional Neural Networks.

Awards

- Rector's fund **Merit Award, 2012.**
Best achiever undergraduate student with annual average of above 80% in all modules, University of Zululand
- Project **2nd Best Software Engineering group Project Leader (SmartDrive), 2013.**
Award Created and developed the second best working native android for my 2nd year group project. Receive an award of best project leader, University of Zululand
- Faculty **Best 3rd year Computer Science student in Faculty of Science, 2014.**
Award University of Zululand
- DST-CSIR **Inter-bursary Support Programme Scholarship, 2016.**
- ABSA **Most Commercially Viable Project - Computer Science, 2016.**
Best poster presentation under the Most Commercially Viable Project category when presenting Honours projects to companies for external assessment.
University of the Witwatersrand, Johannesburg
- DST-CSIR **Inter-bursary Support Programme Scholarship, 2017.**
- Deep **Won 'Machine Learning: A probabilistic Perspective by Kevin Murphy', September 2017.**
Learning Poster presentation awarded (Automated Parking Space Detection) for innovative use of deep learning techniques.
Indaba 2017 University of the Witwatersrand, Johannesburg
- 8th PG **Certificate of participation:, October 2017.**
- X-Faculties **Flash talk and poster presentation about my Master's project, Automated Parking Space Detection.**
Symposium University of the Witwatersrand, Johannesburg
- DST-CSIR **Inter-bursary Support Programme Scholarship, 2018.**

Publications

- 2017
Nyambal, J. and Klein, R. (2017). Automated parking space detection using convolutional neural networks. In *2017 Pattern Recognition Association of South Africa and Robotics and Mechatronics (PRASA-RobMech)*, pages 1–6. IEEE.

Training

- 2017 **High Performance Computing Winter School at Stellenbosch University: C & Python programming for cluster computing., Hosted by the CHPC, CSIR.**

Talks

- 4 April 2018 **Introduction to Machine Learning and Deep Learning, Deep learning IndabaX Centrafrique, Ecole Nationale Supérieure Polytechnique de Yaoundé - Cameroon.**
- 7 September 2018 **Computer vision in your daily life, Retro Rabbit Conference, Retro Rabbit Pretoria.**

Extracurricular Activity

- 2012 - 2014 **Playing tennis for the University of Zululand Team (USSA 2012 - USSA 2013), University of Zululand.**
- 2014 **Elected Chairperson Computer Science Society, University of Zululand.**

- 2014 **Elected Vice-Chairperson International Student Society**, *University of Zululand*.
- 2016-Present **Wits Tennis player**, *University of the Witwatersrand*.
- 4 - 6 April **Co-Organizer Deep learning IndabaX Centrafrique**, *Ecole Nationale Supérieure Polytechnique de Yaoundé - Cameroon*.
- 2018
- 2 - 4 April **Co-Organizer Deep learning IndabaX Cameroon**, *French Institute - Yaounde, Cameroon*.
- 2019

References

- 1- **Dr. Richard Klein**, *Lecturer*.
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- 2- **Dr. Pravesh Ranchod**, *Lecturer*.
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- 3- **Prof. Turgay Celik**, *Professor*.
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