

Julien Nyambal

Education

- 2019 - Present **PhD in Computer Science (Machine Learning)**, Supervisors: **Dr. Richard Klein & Prof. Turgay Celik**, *University of the Witwatersrand, Johannesburg, South Africa.*
- 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.*

Professional Experience

- Sept 2022 - Present **Senior Machine Learning Engineer**, *Capitec Bank - Business Bank, Johannesburg, South Africa.*
- **Credit Data Mart** (Sept 2022 - Present):
 - **Project Description:** For the new Capitec Business Bank, Data Warehousing exercise to have a mapping of all the components of the bank like teller, clients, overdrafts and all sorts of products, in the form of Dimensions and Facts.
 - **Responsibilities:**
 - Plan, develop and orchestrate Dimensions and Facts for some core banking operational tables,
 - Review those tables for better integration to the external systems to use, e.g: propensity model development.
 - **Overdraft Campaign** (Sept 2022 - Present):
 - **Project Description:** For the new Capitec Business Bank, there is a use to leverage Retail and previous business users to build a data-driven lending solution, through credit product like overdraft, credit cards ...
 - **Responsibilities:**
 - Orchestrate and organize the solution for cloud deployment,
 - Mentor Junior and intermediate Data Scientists and Engineers for them to develop the system,
 - Advise on best practice of cloud components utilization
 - Build data and process Pipeline to automate feature creation and deployment on AWS. Built the orchestration layer from data ingestion to features delivery
 - **Transaction Categorization** (Sept 2022 - Present):
 - **Project Description:** For the new Capitec Business Bank, assist the team into building a system to dynamically categorize financial transactions performed by the clients either via EFT, Cards and another mean of moving money from one account to the other
 - **Responsibilities:**
 - Rewriting or optimizing codebase written by dedicated teams for cloud adoption,
 - Build data and process Pipeline to automate feature creation and deployment on AWS

- April 2022 **Technical & Engineering Lead, Reech (Startup), Johannesburg, South Africa.**
 –Present
- **Project Description:** Create an awesome social media app to link people up.
 - **Responsibilities:**
 - Currently designing the overall software architecture design,
 - Hands-on working the Machine Learning components for the recommendation engine, and the different services needed to recommendations to be surfaces to the customers,
 - Responsible for accessing and hiring new team members for the backend team,
 - Drive the main technical choices for the app.
- Dec 2019 – **Senior Machine Learning Engineer, Consultant, Entelect, Johannesburg, South Africa.**
- August 2022
- **Standard Bank: Corporate Investment Banking - FX Tips (Sept 2020 - August 2022):**
 - **Project Description:** Hinting or Recommend clients on potential Forex transactions (leads) they can make using their transactions across multiple financial systems.
 - **Responsibilities:**
 - Lead Machine Learning Engineer
 - Built from scratch and currently maintaining the Data Engineering end2end pipelines, from data ingestion to leads delivery,
 - Responsible for major decisions on the design and architecture of the solution,
 - Built Machine Learning models to use in the process, and integration in the pipeline. This involved fine-tuning and re-calibrating the model given the users feedback, investigating for better models for the inference,
 - Brought the project to be the winner in its category by bring in a revenue of over \$300000 over 6 months after launch,
 - Mentored and assisted and mid-level junior developers and guided data scientists throughout development.
 - **Standard Bank: Corporate Investment Banking - Internal Credit Market Data (April 2020 - Sept 2020):**
 - **Project Description:** Help the Risk department of the bank to have an aggregated set of financial information on daily basis using trusted financial data sources.
 - **Responsibilities:**
 - Built from scratch a Python-based Backend system to seamlessly pull financial data and summarize currency pairs and valuable information out of them, API endpoints,
 - Build REST API to control the daily pulls and internal calculations,
 - Wrote from scratch mathematical calculations from C# to Python since using Python stack
 - **Standard Bank: Personal Business Banking - Internal Incident Reporting System RMP (March 2020 - April 2020):**
 - **Project Description:** Enhance incident reporting in the banks systems using NLP and GraphDB as opposed to relational DB. It reduced human interaction and faster ticket assignment.
 - **Responsibilities:**
 - Making incident reports in the back escalating quicker using NLP,
 - Assisted in building GraphDB representation of the hierarchy in the bank,
 - **Standard Bank: Personal Business Banking - Forex Customer Analysis (Dec 2019 - Jan 2020):**
 - **Project Description:** POC to try to predict currency pair value using time series and RNN.
 - **Responsibilities:**
 - Exploring and Analyzing Forex data (time series) to draw potential pattern.
- Feb 2019 – **Part Time Lecturer, University of the Witwatersrand, Johannesburg, South Africa.**
- Jan 2021
- Introduction to Programming and Algorithms, COMS 1022A
 - Introduction to Data Structures And Algorithms, COMS 1017A
 - Computer Networks, COMS 2014A

- Apr 2018 – **Machine Learning Engineer, Consultant, Retro Rabbit**, Johannesburg, South Africa.
- Dec 2019 ○ **Nedbank Avo by Nedbank** (Apr 2019 - Nov 2019):
- **Project Description:** Customizing offering to clients based on the spending habits,
 - **Responsibilities:**
 - Performed Data Analysis and Exploration for client segmentation on credit cards transactional data on over one year,
 - Built and evaluated models for client segmentation,
 - Assisted in designing and building the PowerBI dashboard for better targeting of high spending clients in South Africa.
 - **Kalido** (April 2018 - April 2019):
 - **Project Description:** Enabling clients to hire or provide services based on skills and proximity.
 - **Responsibilities:**
 - Enhanced and supported the backend Machine Learning Architecture in place,
 - Machine Learning Model Investigation and selection for the solution,
 - Set up the AWS ECR environment to replace the current Hadoop Yarn Structure,
 - Increase clients matching with data analysis, AB testing and multi-model competitions (SageMaker was not yet available yet)
- Jun 2017 – **Teaching Assistant, University of Witwatersrand**, Johannesburg, South Africa.
- Apr 2018 ○ Marking assignments, tests, invigilations, tutoring, monitoring laboratory work
- Feb 2013 – **Teaching Assistant, University of Zululand**, KwaDlangezwa, South Africa.
- Nov 2014 ○ Marking assignments, tutoring, monitoring laboratory work

Spoken Languages

English, *Professional Level*.

French, *Native*.

Training & Certifications

- May 2023 **AWS Certified Solutions Architect – Associate**, *Link to Certificate*, AWS.
- April 2021 **Microsoft Certified: Azure AI Fundamentals**, *Link to Certificate*, MS Azure.
- April 2021 **Microsoft Certified: Azure Data Fundamentals**, *Link to Certificate*, MS Azure.
- May 2020 **AWS Certified: Cloud Practitioner**, *V8YV563CMMQE13KG*, AWS.
- Sept 2020 **Microsoft Certified: Azure Fundamentals**, *Link to Certificate*, MS Azure.
- May 2020 **Introduction to Calculus**, *Link to Certificate*, Coursera.
- June 2017 **High Performance Computing Winter School at Stellenbosch University: C & Python programming for cluster computing.**, *Hosted by the CHPC*, CSIR.

Talks

- March 2021 **Why GPUs for Machine Learning?**, *Internal Entelect Conference*, Johannesburg - South Africa.
- February 2020 **Deep Learning and its application: Johannesburg // AI - Machine Learning - Chatbots**, *Johannesburg // AI - Machine Learning - Chatbots*, Johannesburg - South Africa.
- February 2020 **Machine Learning (or Data Science) in Production: Machine Learning (or Data Science) in Production - Julien Nyambal**, *Meetups - Intuitive Intelligence.AI*, Johannesburg - South Africa.
- May 2019 **Deep Learning and its application: Indaba X Ethiopia 2019**, *Deep learning IndabaX Ethiopia*, Wolaita Sodo University - Ethiopia.
- April 2019 **Machine Learning in Production: Indaba X Cameroon 2019**, *Deep learning IndabaX Cameroon*, L’Institut Français du Cameroun - Cameroon.
- Sept 2018 **Computer vision in your daily life: Retro Rabbit Conference**, *Retro Rabbit Conference*, Retro Rabbit Pretoria - South Africa.

April 2018 **Introduction to Machine Learning and Deep Learning: Indaba X Cameroon 2018**, *Deep learning IndabaX Centrafrique*, Ecole Nationale Supérieure Polytechnique de Yaoundé - Cameroon.

Academic Activities

- Dec. 2022 **Reviewer Black In AI**, *NEURIPS Workshop*, New Orleans, United States.
- Nov. 2021 **Reviewer Black In AI**, *NEURIPS Workshop*, Virtual.
- May 2021 **Reviewer Black In AI Research Grant**, *NEURIPS Workshop*.
- October 2020 **Reviewer Black In AI**, *NEURIPS Workshop*, Virtual.
- October 2019 **Reviewer Black In AI**, *NEURIPS Workshop*, Vancouver, Canada.
- August 2019 **Tutor**, *Deep Learning Indaba, Kenya 2019*.
- April 2019 **Co-Organizer Deep learning IndabaX Cameroon**, *French Institute - Yaounde, Cameroon*.
- April 2018 **Co-Organizer Deep learning IndabaX Centrafrique**, *Ecole Nationale Supérieure Polytechnique de Yaoundé - Cameroon*.

Achievements I am Proud of

- 2021 **Standard Bank Excellence Awards Nominations: FX Tips Project Winner**, *FX Tips, the project I lead on the Technical side was nominated and won the Standard Bank Excellence Award of the year with the highest ROI, user adoption and best solution.*, Standard Bank, Corporate Investment Banking, South Africa.
- 2017 **Inter-Bursary Support Programme Scholarship**, *Department of Science and Technology of South Africa - Council for Scientific and Industrial Research Merit Bursary*, DST - CSIR for my Master's at The University of the Witwatersrand., South Africa.
- 2017 **Won Machine Learning: A probabilistic Perspective by Kevin Murphy - 3rd Place**, *Poster presentation awarded (Automated Parking Space Detection) for innovative use of deep learning techniques.*, Deep Learning Indaba, South Africa.
- 2016 **Inter-Bursary Support Programme Scholarship**, *Department of Science and Technology of South Africa - Council for Scientific and Industrial Research Merit Bursary*, DST - CSIR for my Honours (4th year) at The University of the Witwatersrand., South Africa.
- 2016 **Best poster presentation under the Most Commercially Viable Project category when presenting my Honours (4th year) projects to companies for external assessment.**, *Most Commercially Viable Project - Computer Science*, ABSA - University of the Witwatersrand, South Africa.
- 2014 **Best 3rd year Computer Science student in Faculty of Science**, *Highest marks amongst of final year students on the department of Computer Science*, University of Zululand, South Africa.
- 2013 **2nd Best Software Engineering group Project Leader (SmartDrive)**, *Built and lead the second best working native android for my 2nd year group project. Receive an award of best project leader.*, University of Zululand, South Africa.
- 2012 **Merit Award Scholarship (Rector's fund)**, *Best achiever undergraduate student with annual average of above 80% in all modules*, University of Zululand, University of Zululand. South Africa

Extracurricular Activity

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

2014 **Elected Vice-Chairperson International Student Society**, *University of Zululand*, South Africa.
2016 - 2018 **Wits Tennis Player**, *University of the Witwatersrand*, South Africa.