

# Jean-Pierre van Zyl, Ph.D. Candidate

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 @jeanpierrevanzyl

 Jean-Pierre van Zyl  
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## Employment History

Feb '25 – Dec '25	<b>Stellenbosch University</b> , Part-time Junior Lecturer, MEng (DS) - Data Analytics, Applied Machine Learning, and Applied Deep Learning
Jul '23 – Dec '24	<b>Stellenbosch University</b> , Teaching Assistant, MEng (DS) and BScHons (CS)
Jul '21 – Jul '23	<b>Stellenbosch University</b> , Tutor, Data Analytics and Applied Machine Learning
Mar '21 – Aug '21	<b>Merlynn Intelligence Technologies</b> , Part-time developer
Jan '21 – Feb '21	<b>Polymorph Systems</b> , Intern
Nov '20 – Dec '20	<b>NMRQL Research</b> , Intern

## Education

2023 – now	<b>PhD Computer Science</b> , Stellenbosch University.
2021 – 2022	<b>MSc Computer Science</b> , Stellenbosch University.
2020 – 2020	<b>BScHons Computer Science</b> , Stellenbosch University.
2017 – 2019	<b>BSc Computer Science</b> , Stellenbosch University.
2012 – 2016	<b>National Senior Certificate</b> , Fairmont High School.

## Research Publications

- [1] J. Van Zyl and A. P. Engelbrecht, "Analysis of classification metric behaviour under class imbalance," *Egyptian Informatics Journal*, vol. 31, p. 100 711, 2025, ISSN: 1110-8665.
- [2] J. van Zyl and A. P. Engelbrecht, "Closed-form expressions for the normalizing constants of the mallows model and weighted mallows model on combinatorial domains," *Mathematics*, vol. 13, no. 19, 2025.
- [3] J. Van Zyl, "Rule induction with swarm intelligence," M.S. thesis, Stellenbosch University, 2023.
- [4] J. van Zyl and A. P. Engelbrecht, "Set-based particle swarm optimisation: A review," *Mathematics*, vol. 11, no. 13, 2023.
- [5] J. Van Zyl and A. P. Engelbrecht, "Rule induction using set-based particle swarm optimisation," in *Congress on Evolutionary Computation*, 2022, pp. 1–8.
- [6] J. Van Zyl and A. P. Engelbrecht, "Polynomial approximation using set-based particle swarm optimization," in *International Conference on Swarm Intelligence*, Y. Tan and Y. Shi, Eds., ser. Lecture Notes in Computer Science, vol. 12689, Springer, 2021, pp. 210–222.

## References

<b>Andries Engelbrecht</b> Professor Stellenbosch University, Stellenbosch.  <a href="mailto:engel@sun.ac.za">engel@sun.ac.za</a>	<b>Tomas Schlebusch</b> CEO NMRQL Research, Stellenbosch.  <a href="mailto:tom@nmrql.com">tom@nmrql.com</a>	<b>Richard Barry</b> CIO Polymorph Systems, Stellenbosch.  <a href="mailto:richar@polymorph.com">richar@polymorph.com</a>	<b>Wilbur Kraak</b> Professor Stellenbosch University, Stellenbosch.  <a href="mailto:kjw@sun.ac.za">kjw@sun.ac.za</a>
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