DEPARTMENT OF COMPUTER SCIENCE

www.up.ac.za/computer-science

KEY RESEARCH IMPACT

EBIT's Department of Computer Science has made an impact in the areas of artificial intelligence, cybersecurity, digital forensics and, more recently, data science. These research areas are supported by the Department's SARChI Chair in Artificial Intelligence, its DRS Chair in Cybersecurity, its Absa Chair in Data Science and the Multichoice Joint Chair in Machine Learning.

RESEARCH OPPORTUNITIES

- Artificial intelligence
- Computer and information security
- Digital forensics
- Computer science education didactics and applications
- System specifications and formal methods
- Software engineering and software architecture
- Data science

RESEARCH PRIDE

Exceptional achievements

The Department has established itself as a very strong research entity both nationally and internationally. It is ranked among the top 1% of computer science departments in the world based on citations of its research outputs (Essential Science Indicators). The department has 2 B-rated NRF researchers and 3 C-rated NRF researchers and the following chairs:

- Prof Jan Eloff Eloff – DRS Chair in Cybersecurity
- Dr Vukosi Marivate – Absa Chair in Data Science
- Prof Nelishia Pillay – Multichoice Joint Chair in Machine Learning, Interim SARChI Chair in Artificial Intelligence

Join the University of Pretoria's Faculty of Engineering, Built Environment and Information Technology and join a world-class research institution.

CAREER PATHWAYS

Postgraduate degree programmes offered by the Department enable graduates to elevate their knowledge of their fields of specialisation in order to excel in their careers. Candidates who are interested in pursuing an academic career will be joining a cohort of world-renowned researchers. The Department has a specialised postgraduate degree programme in Big Data and Data Science to address the need for capacity in this scarce skill arena. The University has existing world-class expertise in multiple disciplines that closely relate to Big Data and Data Science. This multidisciplinary degree programme spreads across a number of academic faculties and departments. Its focus is to provide educational opportunities on a postgraduate level for researchers and practitioners in Big Data and Data Science to investigate needs both in South Africa and in the international landscape. Graduate professionals from industry can leverage this degree to re-skill themselves in the building blocks of Big Data and Data Science, while researchers can excel in related research projects. The degree forms part of the Faculty's Big Data Science strategic initiative, which includes an already established Institute for Big Data and Data Science and the appointment of an the Absa Chair for Data Science.

POSTGRADUATE DEGREE PROGRAMMES

BScHons Computer Science

An honours degree is a prestigious degree intended for those who wish to obtain a professional qualification of international standing and take their place in the information technology industry or in computer science academia.

MSc Computer Science

The MSc Computer Science degree is a research degree requiring the candidate to carry out research in one the of Department's focus areas listed in this document. It assesses the candidate's ability to plan, initiate, carry out and report on a scientific investigation.

MIT Big Data Science

The focus of the MIT Big Data Science degree is to provide educational opportunities on a postgraduate level for researchers and practitioners in Big Data Science, cognisant of the needs in the South African landscape.

PhD Computer Science

This is a research degree that requires the candidate to carry out research that makes a significant and original contribution to the body of knowledge in an area of specialisation in one the of Department's focus areas listed in this document.

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