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## **UCT researcher secures global grant to test AI solutions for youth unemployment**



Dr Tim Köhler believes well-designed AI tools may help ease specific constraints young people face as they try to navigate the labour market.

Photo: Lerato Maduna.

A University of Cape Town (UCT) researcher has secured a prestigious international research grant to investigate whether artificial intelligence (AI) can improve employment prospects for unemployed young people in South Africa, placing local youth at the centre of a global debate on the future of work.

Dr Tim Köhler, a senior research officer at the [Development Policy Research Unit](#) in UCT's [School of Economics](#), is among 19 early-career researchers worldwide selected from more than 300 applicants to receive funding from Schmidt Sciences' AI at Work programme. The

programme is investing over US\$3 million (about R48 million) in real-world studies examining how generative AI is reshaping labour markets.

Köhler's project is the only South African-led study in the global cohort and will generate the first rigorous evidence from a developing-country context on how a generative AI-powered career guidance tool affects job-search outcomes for unemployed youth.

Youth unemployment remains one of South Africa's most urgent socio-economic challenges. According to Statistics South Africa, around 60% of the youth labour force aged 15 to 24 and 40% of those aged 25 to 34 are unemployed, affecting roughly five million young people. This persistent exclusion fuels inequality and poverty, while prolonged unemployment limits income, skills development, confidence and long-term opportunity.

"A variety of factors explain these high rates, but for young jobseekers, severe information constraints can play a particularly important role," said Köhler. "They may not know which career paths are viable given their circumstances, what skills employers are actually looking for, or how to navigate both formal and informal labour markets."

These constraints make South Africa a critical testing ground for understanding AI's potential role in labour markets where unemployment is structural and opportunities are scarce.

"If AI can help young people navigate these complexities here, the lessons are likely to be relevant for many other countries across the continent and the Global South," Köhler said.

### **Global programme, local relevance**

The AI at Work programme, run by United States-based non-profit Schmidt Sciences, supports research examining how AI affects productivity, wages, employment and careers. Awardees represent institutions across eight countries.

According to Schmidt Sciences, the aim is to generate credible, real-world evidence as AI adoption accelerates, often faster than policy and regulation can respond.

"This award places UCT and South Africa more broadly at the forefront of an emerging global conversation about AI and work," said Köhler. "One that has so far been dominated by evidence from high-income countries."

### **Testing an AI career guidance tool**

The study will evaluate an AI-based career guidance tool designed specifically for unemployed young people. The tool is being co-designed with a Cape Town-based technology firm and shaped by engagement with non-governmental organisations, researchers and government stakeholders working in youth employment.

Powered by large language models and built for low-bandwidth environments, the tool will function as a personalised, interactive assistant accessible on phones or computers.

"Through a simple conversational interface, users can receive guidance tailored to their own circumstances," Köhler explained. "That might include identifying realistic job opportunities, improving a CV, preparing for interviews, or considering training or self-employment pathways when formal jobs are limited."

The objective is not simply to provide more information, but to deliver better, context-specific guidance.

"Many young people receive generic advice that doesn't reflect local labour market conditions or their personal circumstances," said Köhler. "We want to see whether more relevant, personalised, dynamic guidance can help improve decision-making and, ultimately, well-being."

### **Generating evidence to inform policy**

A defining feature of the project is its use of a randomised controlled trial, widely regarded as the gold standard for determining whether an intervention causes measurable changes in outcomes.

By randomly assigning access to the AI tool, the research team will isolate its impact on employment outcomes, job-search behaviour, confidence and expectations.

The study will also assess potential unintended consequences, such as reinforcing inequalities or raising expectations without improving access to opportunities.

Köhler emphasised that AI alone cannot solve South Africa's structural unemployment crisis. "Our expectation is not that AI is a silver bullet for solving unemployment," he said. "But if well designed, it may help ease specific constraints young people face as they try to navigate the labour market."

If effective, the tool could offer a scalable, low-cost complement to existing employment, training and job-readiness programmes.

"For policy makers, the findings can help inform whether and how digital tools should form part of a broader youth employment strategy," Köhler said. "For educators and training providers, the results may highlight the value of personalised guidance."

The project aligns with UCT's commitment to socially responsive, evidence-based research that advances development in South Africa and beyond.

"Ultimately, the aim is to support more grounded and responsible approaches to using technology," Köhler said, "as part of a wider effort to expand opportunities for young people and reduce poverty and inequality."

*Story by Myolisi Gophe, UCT News.*

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