

Dr Tristan Friedrich KLEINSCHMIDT

NATIONALITY	Australian	
DATE OF BIRTH	30th of December 1983	
CONTACT INFORMATION	371 Beach Road City Gate, #15-03 Singapore 199597	Phone: +65 9771 9781 Email: kleinschmidt_tf@yahoo.com.au LinkedIn: www.linkedin.com/in/tristan-kleinschmidt-97947515
SKILL SUMMARY	<ul style="list-style-type: none">• Problem solving: find the right tool to solve the problem• Communication: simplify complexity, and make it actionable• Enablement: insights are only part of the consulting framework• Team management: build a community	
DATA SCIENCE SUMMARY	<ul style="list-style-type: none">• Discrete-event simulation (DES): 8yrs experience delivering DES for capital and operational decisions• Mathematical optimization: three projects using mixed integer programming in industrial goods• Machine learning (ML): one project delivered using ML pipelines for arrival prediction of bulk carriers	
PROFESSIONAL EXPERIENCE	<div>Consultant and Senior Data ScientistFebruary 2019 – Current <i>BCG Gamma, The Boston Consulting Group, Singapore</i><ul style="list-style-type: none">• Gamma SEA lead for Industrial Goods and Augmented Analytics topics• Discrete-event simulation of beneficiation plant: identified co-commitments to deliver volume targets for a \$70m investment• Machine learning prediction of iron ore vessel arrival time: 5-15% precision increase over existing model• Medium-term market price discovery for commodity market using mixed integer programming: potential \$90m profit increase• Integrated sales and operations planning optimization for pulp and paper mills, palm oil refineries: identified up to 10% margin improvement</div> <div>Principal Consultant2012 – 2019 <i>The Simulation Group, Brisbane/Perth, Australia</i><ul style="list-style-type: none">• Simulation consulting projects regional team lead• Copper concentrator design verification: defined maintenance and 3rd-party logistics requirements to achieve production targets for \$2b+ greenfield project• Volume risk assessment of iron ore and coal capital projects: identified more robust infrastructure and product strategies worth additional \$400m+ NPV• Capital expansion planning and operational improvements across iron ore, coal, copper and aluminium mining and processing, as well as public rail networks and brick making facilities</div> <div>Project Officer2010 – 2012 <i>Airports of the Future Project, Queensland University of Technology, Brisbane, Australia</i><ul style="list-style-type: none">• Managed collaboration of 30+ global research partners investigating the future of air travel• Secured \$900k to establish Integrated Command & Control Facility for Large-Scale Critical Infrastructure Management• Team awarded 2011 Engineers Australia QLD Division Engineering Excellence Award for R&D• Published 3 peer-reviewed journal articles & 5 international conference papers, including research focus on airport passenger simulation using agent-based modelling</div>	
DATA SCIENCE SOFTWARE SKILLS	<ul style="list-style-type: none">• Languages: Python, Java, C/C++• Simulation: AnyLogic, ARENA• Optimization: Python (PuLP, pyomo), AIMMS, Gurobi• Machine Learning: Python, sci-kit learn• General: Git, SVN, Matlab, R, Tableau, SQL	

EDUCATION

Doctor of Philosophy (Elec Eng)

2006 – 2010

Queensland University of Technology, Brisbane, Australia

- Dissertation Title: “*Robust Speech Recognition using Speech Enhancement*”
- Principal Supervisor: Professor Sridha Sridharan
- Associate Supervisor: Dr Michael Mason
- Key Research Areas: Automotive Speech Recognition and Speech Enhancement

Graduate Certificate in Research Commercialisation

March 2008 – June 2008

Queensland University of Technology, Brisbane, Australia

Master of Engineering Science (Computer & Communications)

February 2005 – January 2006

Queensland University of Technology, Brisbane, Australia

Bachelor of Engineering (Electrical & Computer) with First Class Honours

February 2002 – July 2005

Queensland University of Technology, Brisbane, Australia

Awarded the QUT University Medal, 2006.

HOBBIES & COMMUNITY

- parkrun volunteer, St Lucia (QLD) & Bishan (Singapore) parkruns, 2018 – 2020.
- Running
- Travel
- Photography