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 HIGHLIGHTS

- Problem solving: find the right tool and approach to solve the problem
- Communication: simplify complexity, make it actionable
- Enablement: insights are only part of the consulting framework
- Team management: build a community

DATA SCIENCE SKILL SUMMARY

- Discrete-event simulation (DES): 8yrs experience delivering DES for capital and operational decisions, primarily in mining & minerals
- 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

Consultant and Senior Data Scientist   *February 2019 – Current*

BCG Gamma, The Boston Consulting Group, Singapore

- 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 bulk carrier arrival time at load port: 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

Principal Consultant   *2012 – 2019*

The Simulation Group, Brisbane/Perth, Australia

- Simulation consulting projects regional team lead
- Copper concentrator design verification: defined maintenance and 3rd-party logistics requirements to achieve production targets for multiple $2b+ greenfield projects
- 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

Project Officer   *2010 – 2012*

Airports of the Future Project, Queensland University of Technology, Brisbane, Australia

- 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

DATA SCIENCE SOFTWARE SKILLS

- 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

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.

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

Referees available on request