

NGOC MAI TRAN

Data-driven mathematician

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http://princengoc.github.io/about.html github.com/princengoc

bitbucket.org/princengoc



ACADEMIC EXPERIENCE

Assistant Professor

Dept. of Mathematics, UT Austin

2017 - 2022 (on-leave) Austin, TX

W-2 Professor

University of Bonn

July 2015 - July 2017 Bonn, Germany

- Combinatorial geometry, optimization & statistics
- High-impact work: algorithms for neuron tracking, causal inference for extreme events, optimization of EMS fleet for city of Austin, solved 10-years-old conjecture in game theory
- Lead seven separate projects. Advise grads and undergrads. Graduate 2 PhDs (UT Austin) and 5 masters (Bonn)

WINNER OF DATA COMPETITIONS

2nd place winner

NeurIPS CityLearn Challenge

2023 Worldwide

- Online algorithm to forecast energy demand.
- Techniques used: MLP

2nd place winner

IEEE BigData Cup (Science4Cast)

2021 Worldwide

- Predict future links in a semantic network.
- Techniques used: graph neural networks, classification, recommendations systems, random walks ranking.
- Solution trained in 15 minutes on personal laptop.

INDUSTRY EXPERIENCE

Quant Researcher

Chicago Trading Company

2021 - current Chicago, USA

- Portfolio optimization, market impact, codes and algorithms optimization

Statistics consultant

WWF, WHO

2007 - 2013 Sydney, Australia / Hanoi, Vietnam

- Clients: World Health Organization, World Wildlife Foundation, the Australian Research Council.

Statistician

Brain Resource Company

2007 - 2008 Sydney, Australia

- Experiment design, wrote algorithms to parse EEG/ECG data

MOST PROUD OF



Wide range of problems I've solved
from pure math conjectures to practical problems in electrode arrays



My students' growth
Some are now in PhD programs at MIT, Berkeley, Michigan, ETH, MPI; others work for Federal Reserve, Citadel, Westpac

STRENGTHS

Problem solver

Team leader

Machine Learning

Statistics

Mathematics

LANGUAGES

Python

R

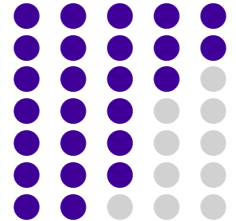
Linux

Scala

TypeScript

Java

Julia



EDUCATION

PhD in Statistics

UC Berkeley

2009-2013

B Sc (Hons) in Mathematics

University of Melbourne, Australia

2007 - 2008

B Math.

University of Newcastle, Australia

2005 - 2007