

# Nelvin Tan

## Curriculum Vitae

### PERSONAL DETAILS

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**Phone:** +65 9363 8261

**Email:** nelvintan@u.nus.edu

**Nationality:** Singaporean

### RESEARCH INTERESTS

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I am interested in problems at the intersection of information theory and statistics. More specifically, my research investigates the fundamental limits and algorithmic performances of statistical algorithms.

### EDUCATION

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**B. Comp. (Honours) – Turing Programme (4.71/5.0)**

August 2017 – May 2021

*National University of Singapore*

Majors: Computer Science and Statistics

Specialization: Algorithms & Theory

### EXPERIENCE

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**National University of Singapore**

June 2019 – June 2020

*Undergraduate Research Opportunities Programme (UROP)*

- Title: Sparse Group Testing: Bounds and Algorithms
- Supervisor: Asst. Prof. Jonathan Scarlett
- Obtained tight information-theoretic lower bounds for sparse group testing.
- Designed and analyzed nearly optimal algorithms for sparse group testing.
- Conference paper published in the IEEE International Symposium on Information Theory.
- Full version available online: [[arxiv link](#)]

**National University of Singapore**

May 2018 – July 2018

*Student Intern*

- Implemented a solution to improve the clustering of news articles to improve data organization.
- Implemented a web application and graph visualization to display the results of the clustering algorithm.

**National University of Singapore**

May 2018 – July 2018

*Orbital (Independent Software Development Project)*

- Developed an event planner application for residential colleges.
- Implemented the QR code scanner feature to help students sign up for events.

**National University of Singapore**

January 2018 – April 2018

*Teaching Assistant*

- Module: CS2030 Programming Methodology II
- Planned, managed, and conducted weekly lab sessions.

**Singapore Armed Forces, 41 Singapore Armoured Regiment**

February 2015 – December 2016

*Reconnaissance Commander*

- Led my tango in battalion level missions.
- Conducted and assisted in basic military training and specialized reconnaissance training.

## SKILLS

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<b>Programming Languages (Computer Science):</b>	Python, Java, C
<b>Programming Languages (Statistics):</b>	R, SAS, SPSS

## AWARDS

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| • GCE A-Level Academic Excellence Award | December 2014 |
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## PUBLICATIONS

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- [1] Nelvin Tan and Jonathan Scarlett, “Near-Optimal Sparse Adaptive Group Testing,” *IEEE International Symposium on Information Theory* (ISIT), July 2020. (Full version: [[arxiv link](#)])