

Chan Khai Ern, Edwin

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Education

National University of Singapore

Aug 2012 – July 2017

- Bachelor of Science in Life Sciences (Honours)
- Minors in Computer Science and Physics
- Thesis Project: Deep Learning in Variant Calling (Python)
- Selected into University Scholars Programme (USP), a multidisciplinary academic programme that accepts only 3% of each undergraduate cohort
- Graduated with Honours (Highest Distinction)

Work Experience

Prime Minister's Office (Strategy Group)

Intern

May 2016- Aug 2016

Strategy Analysis

- Developed recommendations for five to ten year strategic shifts in Singapore's technology and science policy -including authoring two internal papers
- Engaged with stakeholders in A*STAR, NRF and other ministries to discuss key technological disruptors and their broad policy implications

Data Analysis and Visualisation

- Performed data collection and analysis for emerging strategic issues and presented findings in general staff meeting
- Developed new data visualisation methods for internal intra-office data streams

Institute of Water Policy

Research Assistant

May 2015 - May 2016

Statistical Analysis and Data Processing

- Performed multivariate analysis on hotel water consumption datasets, using statistical tools such as principal components analysis and factor analysis
- Submitted a technical report to PUB analyzing the determinants of hotel water consumption in Singapore

Sector-based Research and Analysis

- Researched on the water provision industries of different countries, in terms of studying key players and analysing potential risk factors involved in national domestic water provision

Skills and Research Projects

- **Languages: Python, Java, L^AT_EX**
- **Applications: R, Stata, MySQL**
- **Relevant Projects:**
 - **Machine Learning and Bayesian Classification Methods for Variant Calling**
 - Designed and built deep learning networks to improve variant calling precision, improving F1 score compared to current published methods by six percent.
 - Designed Bayesian networks for probabilistic ranking of functional genes
 - **Online Peptide Database Website Implementation with MySQL**
 - Created automated online data-mining and trawling scripts
 - Built a website with MySQL database for peptide queries

Achievements

Valedictorian, NUS Life Sciences class of 2017 **2017**

- Awarded for achievements in research, academics and contributions to community
- Delivered valedictory speech at the commencement ceremony for Life Sciences graduates

University Scholars Programme Presidents Honours Roll **2016**

- Awarded for outstanding academic achievement as well as strong leadership in co-curricular activities

NUS Undergraduate (Merit) Scholarship **2013**

- Fully tenured scholarship for undergraduate studies
- Awarded for exceptional academic achievements and strong leadership potential

CCA Experience

42nd Life Sciences Society Executive Committee

President

Aug 2013 - Aug 2014

Leadership, Coordination and Liaising

- Coordinated and directed the activities of the Life Sciences Society, a 40 member-strong nationally registered society in NUS
- Liaised with professors, alumni and academic institutions such as the Tropical Marine Science Institute (TMSI) and Raffles Museum for Biodiversity (RMBR)

Project Planning and Execution

- Initiated a wide range of programmes for professional and academic development of students, including the creation of a peer mentorship programme with over 150 freshmen and 30 senior peer mentors participating, as well as a series of career-focused talks with prominent alumni
- Spearheaded various activities to promote community vibrancy, including the running of a four-day social camp that involved over 200 undergraduates and a bimonthly volunteering programme with Melrose Home

Cornell University

Jan 2015 - Jun 2015

- Student Exchange Programme, spring semester, 2015
- Volunteered at Loaves and Fishes, a soup kitchen for the homeless in Ithaca, New York

Additional Information

- **Interests:** Travelling (road trips in particular), reading, board games and swimming
- **Additional Coursework:**
 - Coursera : Discrete Mathematics, Machine Learning and Big Data Analysis with Scala and Spark
 - Udemy : Django Python Web Development