

# Kittapat Ratanaphupha

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E-mails: kittapat.ra@depa.or.th, 657012423@student.chula.ac.th,

GitHub: KittapatR

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## Related Topics

### Interests on Mathematics

- Geometric Analysis
  - Geometric Measure Theory
  - Yamabe Problem
- Proof assistant and proof theory

### CS, DS and technology specialties

- Signal processing
- Geospatial data analysis
- Data visualization and web application development

### Others

- Legal analysis
- Data governance
- Philosophy of History, 17–19th century Thai History enthusiast

## Education

- **Undergraduate (August 2018 – May 2022):** BSc Health Data Science, Joint degree with Computer Engineering, King Mongkut's University of Technology Thonburi and Princess Srisavangavadana College of Medicine, Chulabhorn Royal Academy (Bangkok, Thailand)
- **Master's degree (August 2022 – Present):** MSc Mathematics, Chulalongkorn University (Bangkok, Thailand)

## Project and Thesis

- **Undergraduate:** Analysis of Genotype-Phenotype-Environment Association Problem within Cassava Storage Roots Metabolic Reaction Network
  - **Advisor:** Asst. Prof. Dr. Santitham Prom-On
  - **Co-advisor:** Assoc. Prof. Dr. Treenut Saithong
  - **Co-advisor:** Asst. Prof. Dr. Saowaluk Kanlapanulak

- **Master's:** TBD

## **Honors and Scholarship**

- (August 2018 – May 2022) Received fully funded scholarship on BSc Health Data Science
- (August 2018) Course exemption on General Physics for Engineering Students I
- (January 2019 – December 2019) Honors program on multivariable calculus, vector calculus and general physics
- (July 2019) Awarded for academic excellency by above 3.50 GPAX on 4.00 scale

## **Publications**

### **Academic article**

- TBD

### **Open article**

- (Tentative) “Strongly relation between Information science and data management”

## **Experiences**

### **Research experience**

- (June 2017 – January 2018) Mathematical Physics Research
  - Colleagues: Asst. Prof. Dr. Sikarin Yoo-Kong and Saksilpa Srisukson, King Mongkut's University of Technology Thonburi.
  - Project: arXiv: 1802.06370

### **Work experience**

- (Occasionally) Freelance Graphic Designer
- (January 2019 – September 2020) Curriculum design team
  - Place: Darunsikkhalai Science School
  - Natural Language Processing task for analyzing an interdisciplinary course design
  - Framework analysis on the curriculum and constructionism in aspect of education
  - Literature review and feasibility analysis on andragogy methods
  - Data transformation project design for the school
- (June 2020 – July 2020) Extracurricular internship
  - Workplace: Government Big Data Institute (GBDi), Ministry of Digital Economy and Society, Thailand

- Project: Text analytics on social network data with collaboration of Department of Revenue, Ministry of Finance
- (June 2021 – August 2021) Summer Internship
  - Workplace: Ramathibodi Hospital, Thailand
  - Project: Data visualization for rational use of medicines by using prescription data

## Employment

- (June 2022 – Present) Government Data Scientist
  - Workplace: Government Big Data Institute (GBDi)
  - Agricultural Sector:
    - \* (Jun 2022 – Present) Data visualization on agricultural data in THailand AGRICultural data platform (THAGRI)
    - \* (Aug 2022) Complex API calling for DINDEE and THAGRI project (Land development department)
    - \* (Aug 2022 – Present) BCG Ratchaburi project on coconut (Design, Research, and Surveying)
  - Public Health Sector
    - \* (2022 – Present) ETL techniques on HIS data for interoperability (follows HL7-FHIR)
    - \* (Jan 2023 – Mar 2023) Web server for testing ETL process on HIS data
    - \* (Sep 2022 – Present) Survival analysis on end-stage renal disease patients
    - \* (Sep 2022 – Present) Call center dashboard on NHSO, Thailand
  - Other sectors
    - \* (Sep 2022) Web scraping on E-commerce data
    - \* (Mar 2023 – May 2023) ECT report: constituencies map, JSON ingestion

## Teaching Experience

- (2018 – 2019) Teaching Assistant in general physics and website development
- (Mid-Jul 2020) Teaching Assistant in on the job training with Department of Revenue, Thailand
- (9 Nov 2021) Discrete Fourier Transform and its application on Numerical Methods II class
- (20 Sep 2022) On the job training; basic THAGRI API usage and applications in business intelligence
- (30 Jan 2023) Super AI engineer; Geospatial data science (Geospatial EDA, Concurrency, Geospatial visualization)