



Jirachote Karunyakorn

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WORK AND ACADEMIC EXPERIENCE

- **Bluefin Life Technologies** (November 2022-May 2023)
 - *Part-time Bioinformatician/ Data analyst*
 - Developing bioinformatics analysis pipelines to conduct pathway enrichment analysis and create a model for scoring the mode of action of curcumin based on responses from various cell lines.
- **Athena AI** (July 2022-Present)
 - *Bioinformatician/ Consultant*
 - Developing bioinformatics pipelines for the calling and prioritizing of variants in whole exome and whole genome sequencing data to support clinical analyses.
 - Designing and implementing functional modules for bioinformatics platform, enabling comprehensive analysis modes, disease risk screening, and publication retrieval.
 - Offering bioinformatics expertise to establish the core workflows of an integrated bioinformatics software system, dedicated to identifying pathogenic clinical variants and mutations.
 - Testing software to ensure precise execution of clinical mutation analysis logic and adeptly identifying and resolving software anomalies.
 - Design initial user experience (UX) and user interface (UI) designs, as well as structuring the software's database architecture.
 - Engaging in communication and coordination with domestic and international companies and government entities as necessitated by project requirements.
 - Providing strategic input for business development and marketing, including sales strategies and competitor analysis.
- **ATGenes Co. Ltd.** (July 2022-Present)
 - *Clinical bioinformatician/ Data analyst*
 - Establishing a clinical bioinformatics pipeline to uncover pathogenic variants with direct relevance to diagnoses from physicians, utilizing whole exome and whole genome sequencing data.

- Conducting literature reviews and performing primary data analysis to assess suspected pathogenic variants in accordance with ACMG guidelines.
- Communicating with international laboratory vendors to arrange sample shipments and obtain data for analysis.
- Writing comprehensive technical medical reports on audited pathogenic variants for physicians.
- Engaging in research and development activities to innovate new bioinformatics pipelines for the analysis.
- Maintaining and overseeing the whole exome and whole genome sequencing database.
- Performing data analysis on internal datasets for scientific research purposes and contributing to the formulation of corporate strategies.
- **Department of Biochemistry, Faculty of Medicine Chulalongkorn University** (October 2020-July 2022)
 - *Graduate student and researcher*
 - Main project: Computational workflow development for identification of polyadenylated RNA in prokaryote from direct RNA nanopore sequencing data with polyuridylation
 - Collaborate project: Using Xpore to build M⁶-Methyladenosine (m6a) signal database
 - Advisor Pornchai Kaewsapsak Ph.D.
- **EPA Academic Center** (January 2022-May 2022)
 - *Part-time biology teacher*
- **Math talent by Dr. Ying** (December 2022-March 2022)
 - *Part-time science teacher*
- **Department of Biology, Faculty of Science, Mahidol University** (April 2019-April 2020)
 - *Undergraduate student*
 - Project title: Comparative phylogeny and DNA barcode of Asian Centipede in genus *Scolopendra* linnaeus, 1758
 - Advisor Warut Siriwut Ph.D.
- **Freelance** (May 2018-Present)
 - *Biology tutor*

EDUCATION

- **Chulalongkorn University** (2020-2022)
 - Graduated school, M.Sc. in Bioinformatics and Computational Biology Program
 - GPAX 4.00
- **Mahidol University** (2016-2019)
 - Faculty of Science, B.Sc. in Biology
 - GPAX 3.71 (First Honor degree)

AWARDS

- **H.M. the King Bhumibhol Adulyadej's 72nd Birthday Anniversary Scholarship (fully funded)** (2020)
Graduated student scholarship with full paid tuition fee and monthly salary
- **MU-backpack scholarship (fully funded)** (2018)
The short-term cultural exchange study in Vietnam
- **HOK scholarship (half funded)** (2015)
The short-term exchange secondary student in Singapore

CERTIFICATES

- **Google Data Analytics** (2023)
Including hands-on, practice-based assessments in data Analytics with spreadsheets, SQL, R and Tableau.
- **Google Advanced Data Analytics** (2023)
Including hands-on, practice-based assessments in data science such as basic machine learning and exploratory data analysis with python.
- **Google Business Intelligence** (2023)
Including hands-on, practice-based assessments in business intelligence such as creating processes that transform data into actionable insights to inform business decisions and building dashboards that employ design best practices to meet stakeholder needs.

WORK SKILLS

- **Bioinformatics**
 - Retrieval of information and data mining (NCBI, ensemble, KEGG, etc.)
 - DNA/RNA sequencing analysis (Sanger, illumina, Oxford Nanopore)
 - Proficient with bioinformatics software (e.g., samtools, GATK, bioconda tools)
- **Programming language**
 - Bash (Basic)
 - R (Intermediate)
 - Python (Intermediate)
 - SQL (Intermediate)
 - HTML5, CSS3 and Javascript (Basic)
 - DAX (Basic)
 - Excel formula (Basic)
- **Data analysis skill**
 - Data wrangling and manipulation (Pandas, Scipy, Numpy, etc.)
 - Data visualization (ggplot, dplyr, matplotlib, etc.)

- Basic Machine learning with scikit-learn (Clustering, Regression, Classification)
- Prompt engineering for generative AI
- Basic web scraping with BeautifulSoup4
- Database querying with MySQL
- Dashboard and report design
- Statistical analysis
- **Dashboard design platform**
 - PowerBI (Intermediate)
 - Tableau (Basic)
 - Looker studio (Intermediate)
- **Soft skills**
 - Data-driven problem-solving through investigation, analysis, reporting, and action
 - Continuous learning and adaptability
 - Strong teamwork and communication
 - Positive growth mindset
 - Proficient in Agile methodology
- **Version control**
 - Git (Basic)
 - Docker (Basic)

LANGUAGES

- Thai (Native)
- English (Intermediate Working Proficiency, TOELF ITP 513)
- Japanese (Basic, JPLT N5)