Masayuki "Moon" Nagai

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EDUCATION

- **DePauw University** — Greencastle IN, USA
  Bachelor of Arts, Major in Bioinformatics — *Aug 2018 – May 2022*
  - **GPA**: 4.00/4.00 cumulative
  - **Awards**: Rector Scholarship (4-year full-tuition), John A. Ricketts Prize in Physical Chemistry Research, Joe H. Petty and C. Norman Frees Delta Upsilon Fraternity Endowed Scholarship, Phi Beta Kappa
  - **Activities**: Information Technology Associate, President of DePauw Data Science Group
  - **Work Authorization**: F-1 visa status - I am authorized to work in the U.S. without sponsorship until July 2025.
- **University of Oxford** — Oxford, UK
  Visiting Student, Computer Science and Genomics — *Sept 2021 – Dec 2021*
- **The University of Tokyo** — Tokyo, Japan
  Top-ranked university in Japan, College of Arts and Science — *Apr 2018 – July 2018*
- **Relevant Coursework**: Deep Learning, Data Mining, Operations Research, Differential Equations, Genomics, Advanced Biochemistry, Biophysical Chemistry, Enzyme Mechanisms, Bioinformatics, Regression & Simulation

EXPERIENCE

- **DePauw University** — Greencastle, IN
  Information Technology Associates Program — *Sept 2019 - Present*
  - **Database Development**: Created a software application that provides a list of promising leads in the area of rare disease research by extracting variants of uncertain significance from the ClinVar database and annotating them with relevant information. The website is available on "https://www.csc.depauw.edu/~mnagai22/".
  - **Technologies and Skills**: Python, Web scraping, Command line tools, MySQL, PHP, HTML, CSS
  Summer Research — *May 2020 - Aug 2020*
  - **AI Development**: Developed an AI program in Java for Gin Rummy play using genetic algorithm and grid search to participate in the EAAI Undergraduate Research Challenge. The work was published in *Proceedings of the 35th AAAI Conference on Artificial Intelligence.*
  Summer Research — *May 2019 - Aug 2019*
  - **Web Application Development**: Developed a web application that allows users to simulate enzyme kinetics data and Michaelis-Menten plots, designed to help the teaching and learning of chemistry. (Available on GitHub)
  - **Technologies and Skills**: R, Shiny Package, HTML
- **Development of Bioinformatics Tools for Companies** — Tokyo, Japan
  Part-time Employee at Amelieff Company — *Dec 2019 - Aug 2021*
  Freelance Developer at ANPLAT Company — *May 2021 - Present*
  - **Software Development**: Created a tool that reflects mutations and splicing junctions on input data and outputs predicted transcripts and open reading frames, a database for animal insurance data, and several pipelines for RNA-seq, Reseq, structural variant detection, and etc.
  - **Technologies and Skills**: Python, SQL, AWS, Tool search from recent papers

PROJECTS

- **Intern at Riken (Scientific Research Institute)**: Currently working on the development of better gene fusion detection algorithm, especially in single-cell RNA seq data.
- **Saint Mary's Data Science Hackathon 2019**: Wrote a movie recommendation program and won the 1st place among undergraduates.
- **College Festival Food Booth**: Represented my class of 30 students for the college festival in the University of Tokyo. Arranged ingredients and materials to set up a food booth. Raised funds, managed the accounting, and made a profit.

ADDITIONAL TECHNICAL SKILLS

- **Languages**: Python, Java, C/C++, R, SQL, HTML/CSS, PHP, JavaScript, Japanese (native)
- **Technologies**: Git, Microsoft Office, Cloud Service (AWS), Docker, Galaxy
- **Lab skills**: TLC, LLE, Column Chromatography, Recrystallization, Rotary Evaporator, NMR, IR, Titration