

Carla Felisha

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ABOUT ME

Biomedical engineering professional with experience in computational biology, lab work, and CAD, I aspire to develop diagnostic or therapeutic technologies to enhance patient care. I believe in the profound impact of healthcare innovations and am seeking opportunities in R&D and data analytics in an entrepreneurial setting to expand my skill set with the goal of creating a startup in the future.

WORK EXPERIENCE

Research Intern, Mechanobiology and Cancer Therapy

Aug 2024 - Present

Mechanobiology Institute (in collaboration with Singapore General Hospital and National Cancer Centre) Singapore

- Tech Skills: Microscopy, Western Blotting, Drug Treatments, Lentiviral Transduction
- Integrating various approaches to study proton irradiation effects on liver cancer to construct a comprehensive model of how the cellular contractility machinery and mechano-related responses are involved in the p53 response.

Research Intern, Computational Biology

May 2024 - Jul 2024

Mechanobiology Institute Singapore

- Tech Skills: Python, MATLAB, ImageJ, Image Batch Processing
- Investigated the dynamics of collective cell motility in ovarian cancer invasion of the peritoneum using computational techniques, including spatial cross-correlation and Bayesian Inversion Stress Microscopy, to precisely quantify and localize cell migration dynamics and mesothelial monolayer stress patterns.
- Developed automated scripts for batch processing and segmentation of approximately 3,600 spheroid image sequences, achieving a 40% improvement in accuracy.

Health System Analyst

Jan 2024 - Feb 2024

KlinikGo Jakarta, Indonesia

- Tech Skills: SQL, PlantUML, diagrams.net
- Created comprehensive system design documentation for a clinic's patient registration page, incorporating 3 data flow diagrams, 2 use case diagrams, 1 activity diagram, and 5 sequence diagrams, ensuring a thorough and detailed understanding of system processes and interactions.
- Proficiency in crafting and executing SQL queries to ensure efficient data management and retrieval.

Database Design for Lab Resources

Nov 2022 - Feb 2023

Centre for Quantum Technologies Singapore

- Tech Skills: Data management
- Developed a centralized database using various platforms such as Notion to streamline the organization of experiments and code, enhancing accessibility and usability for diverse user groups across the lab with 100% user adoption among lab members.

Search Engine Optimization (SEO) Manager

Aug 2020 - Dec 2020

Spin Warriors Tangerang, Indonesia

- Tech Skills: HTML, CSS, Google Analytics
- Enhanced website content and product pages through strategic optimization of meta tags, URLs, and on-page elements, resulting in a 35% increase in website traffic and achieving top search rankings in the targeted area.

EDUCATION

National University of Singapore

Aug 2022 – May 2026

Bachelor of Engineering (Hons) in Biomedical Engineering

Singapore

SKILLS

- **Programming:** Python (NumPy, pandas, scikit-learn, TensorFlow), MATLAB, R, C, SQL
- **Data Analytics:** Tableau, Power BI, Excel, Google Analytics, GraphPad Prism
- **Design:** SolidWorks (CSWA-MD Certification), AutoCAD, Fusion360, Procreate, Canva
- **Language:** Fluent in English (IELTS Band 8.5) and Bahasa Indonesia. Intermediate fluency in Mandarin (HSK Level 4).