# **Christopher Lam**

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## **Professional Summary**

I'm a Software Engineer with 5+ years of experience in frontend development and 2 years of experience in data science applied to biology. Demonstrated expertise developing web applications using React, TypeScript and JavaScript. Proficient at predictive modeling, machine learning, and big data analytics and Python's scientific tech stack. I combine strong programming experience to deliver impactful data-driven solutions.

### **Technical Skills**

Programming & Development: JavaScript, TypeScript, React, Redux, Next.js, Gatsby.js, Svelte.js, HTML, CSS, SCSS, Jest, Cypress

Data Science & Machine Learning: Python (SciPy, NumPy, Pandas, TensorFlow, PyTorch, Jupyter), Neural Networks, SVMs, PCA, MDS, Decision Trees, Random Forests, R Cloud & DevOps: AWS (S3, EC2), DigitalOcean, Supabase, Cloudflare Pages Functions, PostgreSQL

Web Scraping & Automation: Cheerio, Puppeteer, Axios

Tools & Platforms: Git, GitHub, Jira, Storybook

### **Professional Experience**

## **Rockefeller University — Research Collaborator**

May 2024 - Nov 2024

- Developed Python pipelines on HPC GPU clusters to queue protein prediction jobs using AlphaFold and CombFold.
- Conducted combinatorial assembly using NumPy and Pandas to divide protein complexes into dimer chains for FASTA input.
- Created PAE, sequence coverage, and pLDDT position visualizations in Jupyter to compare predicted and experimental protein structures.

#### Walter and Eliza Hall Institute of Medical Research — Research Assistant

Nov 2023 - Jan 2024

- Cleaned and transformed large CSV datasets containing clonal cell count data.
- Applied machine learning techniques like PCA and MDS to do feature extraction and generate visual plots.
- Automated bar plot visualizations using Seaborn and filtered data for export to R Studio.

#### **Sportsbet** — React Engineer

Jun 2023 - Sep 2023

- Developed shared UI components for web and mobile using React Native, TypeScript, and Redux.
- Re-engineered a user registration flow, optimizing development time by 30%.
- Created and validated KYC Confirmation components for user verification, ensuring proper data format before submission.

## AIA Insurance — Senior Frontend Developer

Jun 2021 - Aug 2022

- Migrated legacy applications to modern React frameworks while integrating with Adobe Experience Manager.
- Built reusable React components using Figma-based UI designs and implemented Redux for state management.
- Reviewed and refactored peer code to improve application performance.

### **Optus** — **Senior Software Engineer**

Jun 2020 - Jun 2021

- Updated RactiveJS Checkout with ReactJS and re-implemented checkout APIs.
- Built a custom payment API integration with Bambora and created a reusable Select component.
- Created and maintained Cypress and Jest tests for unit testing and code coverage.

#### Education

### **Vrije Universiteit Amsterdam — Semester Exchange (2024)**

Internship and Global Experiences Grant

Courses Completed: Structural Bioinformatics, Natural Language Processing, Bioinformatics for Translational Medicine, Advanced Biophysics

University of Queensland — Master of Quantitative Biology (2022 – 2024)

Coder Academy — Diploma of IT (2018)

Macquarie University — Bachelor of Commerce (Marketing / Accounting) (2013 – 2016)

### **Additional Information**

Came fourth in the Endava / Google Dathathon Kaggle Competition using a Customer Retention / Churn dataset: <a href="https://kaggle.com/competitions/customer-retention-datathon-amsterdam-edition">https://kaggle.com/competitions/customer-retention-datathon-amsterdam-edition</a>, 2024. Kaggle.

GitHub Repository: Human Exosome Project

(https://github.com/christopheragnus/human\_exosome)

Languages: English (fluent)