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SUMMARY

Staff ML Research Engineer and second engineering hire at Genesis Molecular AI, with 6+ years of cross-functional experience spanning ML research, software engineering, and collaboration with scientists. Combines rigorous ML experimentation with reliable software engineering to turn research into production tools.

EDUCATION

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Master of Engineering, Electrical Engineering and Computer Science, **GPA: 5.0/5.0**

05/2020

Bachelor of Science, Electrical Engineering and Computer Science, **GPA: 4.9/5.0**

06/2019

- Concentration in Artificial Intelligence.
- TA for Mobile and Sensor Computing (Spring 2019, Spring 2020).

WORK EXPERIENCE

Genesis Molecular AI

06/2020 – Present

Staff ML Research Engineer | 07/2024 – Present

San Diego, CA

Senior ML Research Engineer | 04/2023 – 07/2024

ML Research Engineer (second engineering hire) | 06/2020 – 04/2023

Molecular generation

- Designed and built a chemist-facing **molecular-design platform** from the ground up, used for **1,000+ virtual screens** across internal and pharma-partner programs; contributed to identifying 350+ compounds with experimentally measured potency below 100 nM.
- Developed and trained a **language model for conditional molecular generation**, evaluating model scaling, training-data strategies, and generation quality; owned benchmarking and deployment into user-facing design workflows.
- Productionized molecule editing, generation, and filtering workflows for a new **agentic drug-discovery platform**, refining agent prompts and user interactions to support chemist-driven molecular design.

Structure prediction

- Implemented **data preprocessing, training, and evaluation** components for Pearl, a state-of-the-art **protein-ligand cofolding model**; established training baselines, introduced pose-quality metrics, and fixed data-preparation errors.
- Extended Pearl to **predict water positions**, owning data-pipeline, loss-function, and performance updates; increased the rate of accurate, physically valid poses by 3.5 percentage points across six datasets.

Molecular property prediction & data

- Improved **multitask ADMET models** through pretraining, fine-tuning, and hyperparameter optimization, reducing aggregate prediction error by $\sim 20\%$ on an external benchmark versus a production-model baseline.
- Built **data pipelines for molecular-model pretraining**, partnering with medicinal chemists to curate, standardize, and validate heterogeneous assay data for potency and ADMET prediction.

ML infrastructure & tools

- Improved **distributed-training reliability and efficiency**, building Ray cluster monitoring to detect GPU underutilization, partnering with infrastructure engineers to diagnose failures, and reducing Docker image size by $\sim 20\%$.
- Built a **React experiment-management dashboard** used daily by ML engineers and researchers for job controls, progress tracking, and logs; optimized PostgreSQL queries to load large job histories up to $22\times$ faster.

Cambridge Mobile Telematics

06/2019 – 12/2019

Software Engineering Intern (Vision Group)

Cambridge, MA

- Developed a deep learning model for monocular 3D object detection and tracking using dashcam videos integrated with phone sensor data to analyze drivers' risk behaviors; reported the research in M.Eng. thesis through MIT's 6A Program.

Jane Street

06/2018 – 08/2018

Software Development Intern

New York, NY

- Increased speed of the internal version-control/code-review tool by minimizing high-overhead calls.
- Implemented a testbed to measure latency of trading algorithms by simulating trade orders.

PUBLICATIONS & PATENTS

- **Pearl: A Foundation Model for Placing Every Atom in the Right Location.** Coauthor, arXiv preprint. 10/2025
- **Chemical computation graphs** (US20240233880A1). 07/2024
- **Computational platform for generating molecules** (US20240233882A1). 07/2024

HONORS AND AWARDS

- **King's Scholarship**, one of nine selected annually in Thailand for fully funded undergraduate study. 2014 – 2019
- **International Physics Olympiad**, Gold Medal, 38th from 383 contestants over 85 countries. 07/2014

SKILLS

Languages: Python, SQL, TypeScript/JavaScript, $\text{\LaTeX}$; Swift (coursework)

ML: PyTorch, PyTorch Geometric, Lightning, Ray; GNNs, diffusion models, multitask learning, transfer learning

Engineering: GCP, Git, Linux, Docker, Kubernetes, PostgreSQL, CI/CD, NumPy, pandas, React, Flask

Spoken Languages: English, Thai (native), Chinese (intermediate), Vietnamese (basic)