Nathaniel Budijono

Resumé

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I am a machine learning specialist seeking to accelerate our ability to learn about math and science.

Education

2018–2022 **Bachelor of Science**, *University of Minnesota*, Computer science and Mathematics.
Focuses: machine learning, computational biology, computational chemistry.
- Reviewer, Minnesota Undergraduate Research Academic Journal; Education Director, App Developers Club; Lab Director, Society of Asian Scientists and Engineers; Mentor, Honors program.

Industry Experience

Jun 2022 – Present **Lead Data Scientist**, *Infinite Campus*.
- Reduced runtime of training and deployment pipeline of machine-learned early warning system to forecast drop out for millions of students by 10x. *duckdb, Kubernetes, Airflow, xgboost*.
- Engineered cloud infrastructure for web analytics. *AWS CDK*.
- Developed parsing engine for internal distributed data aggregation. *Java, SQL, RabbitMQ*.

Winter 2021-2022 **Intern**, *Loyal Cellular Longevity*, Computational biology team.
Wrote cross-team documentation and worked on corporate website. *Typescript*.

Sumemr 2021 **AI Research Intern**, *Smart Information Flow Technologies (SIFT)*.
- Developed decoding scheme for BERT-based language model to improve joint entity-relation classification. *Huggingface, PyTorch*.
- Statistically analyzed sentiment and word embeddings of online groups of interest for publication. *spaCy*.

Summer 2020 **Research Assistant**, *University of Minnesota*, Chad L. Myers.
- Created a visualization pipeline for genetic interaction networks from raw combinatorial CRISPR screen data. *Networkx, Scipy*.
- Investigated machine learning algorithms for predicting gene function from genetic interaction networks. *PyTorch, Scikit-learn*.

Summer 2019 **Software Engineer Intern**, *Rally Health*, Data engineering team.
- Developed ETL jobs, created a utility for data pipeline observability. *Scala Spark, Airflow, Datadog, Databricks*.

Publications

- *A global genetic interaction map of a human cell reveals conserved principles of genetic networks*. Maximilian Billmann, **et al.** Submitted 2025.
- *Ludus: An Optimization Framework to Balance Auto Battler Cards*. **Nathaniel Budijono**, et al. AAAI Symposium on Educational Advances in Artificial Intelligence, 2021.

Awards

Oct 2021	Winner (1/20, $500), Acceleration Consortium Hackathon for Scientific Database Management
Jul 2021	David E. Shaw Research Science and Engineering Undergraduate fellowship
Sep 2021	Honorable mention (top 5+/1300), 3blue1brown Summer of Math Exposition
Oct 2020	Finalist (top 10/n, $1000), Wells Fargo Campus Analytics Challenge
Mar 2020	Best ML, AI, and Social Good Hacks, Hacktech (Caltech hackathon)