Nathaniel Budijono

Resumé

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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

Sep 2021 – **Intern**, *Loyal Cellular Longevity*, Computational biology team.

May 2021 – **AI Research Intern**, *Smart Information Flow Technologies (SIFT)*.
Aug 2021
- 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. *spaCy*.

May 2019 – **Software Engineer Intern**, *Rally Health*, Data engineering team.
Aug 2019
- Created a utility for data pipeline to gauge data throughput, monitor job duration, and track which rows failed which data validation. *Scala, Datadog API, Databricks*.
- Created a comprehensive and responsive web dashboard with pipeline health and performance metrics for data pipeline. *Airflow, Flask, SQLAlchemy, nvd3.js*.
- Created an extract-transform-load (ETL) job to process ledger data from incentives program and performed end-to-end testing. *Apache Spark, SQL*.

Publications

- *Ludus: An Optimization Framework to Balance Auto Battler Cards*. **Nathaniel Budijono**, Phoebe Goldman, Jack Maloney, Joseph Mueller, Phillip Walker, Jack Ladwig, and Richard Freedman. AAAI Symposium on Educational Advances in Artificial Intelligence, 2021.
- *Linguistic Factors in Incel Messaging*. Sonja Schmer-Galunder, Ruta Wheelock, Joan Zheng, Claire Yang, Ian Magnusson, Jeremy Gottlieb, Scott Friedman, and **Nathaniel Budijono**. Special Issue for the Workshop on Online Abuse and Harms, 2021.

Research Experience

May 2020 – **Research Assistant**, *University of Minnesota*, Department of Computer Science.
Aug 2020 Advisor: Prof. Chad Myers
- Created a pipeline for visualizing 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*.

Awards

Oct 2021	Winner (1/20, $500), Acceleration Consortium Hackathon
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)