Nicholas Miklaucic

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https://github.com/nicholas-miklaucic

Education

Northeastern University, Boston, MA — **September 2019 – Present**
Khoury College of Computer Sciences, Honors Program — **May 2023**
Candidate for a Bachelor of Science degree in Data Science & Behavioral Neuroscience
GPA 3.74/4.00 CS GPA 3.93/4.00
Coursework: Artificial Intelligence, Information Presentation & Visualization, Database Design, Algorithms & Data, Neurobiology, Clinical Neuroanatomy, Psychology of Language

Computer Knowledge

Languages	*Proficient*	Python, Rust, Typescript, JS, HTML/CSS, Java
	Familiar	R, Haskell, Emacs Lisp, C++
Libraries		PyTorch, Pyro, Tensorflow, numpy, pandas, seaborn, scipy, scikit_learn, PyMC3, bokeh, React
Software		Jupyter, Linux, LaTeX, Tableau, Excel
Competitions		Competed in ICPC 2020/21 (team NEU Alpha): 13th at regionals, 30th in NADC East
		YHack 2022, Winner (Travel division): https://devpost.com/software/loca-nbxors

Work Experience

Skyhawk Therapeutics — **July 2021 – December 2021**
Co-op Student Intern

- Create and apply novel machine learning models to remove statistical artifacts from gigabytes of genomics data
- Develop bespoke, interactive web dashboards using Python and Javascript to visualize output analyses
- Thoroughly review existing literature to implement and apply state-of-the-art bioinformatics algorithms

Generalizable Robotics and Artificial Intelligence Labratory, Northeastern University — **October 2021 – Present**
Undergraduate Researcher

- Design new methods to learn from natural language, improving performance on reinforcement learning tasks
- Use modern NLP and deep learning techniques and engineer neural networks in PyTorch

Ethics Institute, Northeastern University — **April 2020 – Present**
Research Assistant

- Visualize data to communicate research findings in published paper
- Interpret and compute statistics from psychology research experience using Python, numpy, pandas, and seaborn
- Analyze and compile statistics from existing research for published literature review

LeanTaaS — **July 2019 – September 2019**
Data Science Intern

- Created visualizations in Python allowing users to quickly diagnose modeling errors in clinic simulations
- Developed novel statistical measures to aggregate complex model diagostics into single interpretable value

Publications

Swire-Thompson, B., Miklaucic, N., Wihbey, J. P., Lazer, D., & DeGutis, J. (2022). The backfire effect after correcting misinformation is strongly associated with reliability. *Journal of experimental psychology. General, 151(7)*, 1655–1665. https://doi.org/10.1037/xge0001131

Projects

Constellate (https://constellate.dev) — **December 2021 – Present**

- Develop open-source interactive web publishing platform for Jupyter notebooks using React, Typescript, Python (8000+ LOC)
- Create explanatory content such as exploration of computing Fibonacci numbers, Bayesian statistics introduction
- Fashion a cohesive design system for web, matplotlib, bokeh, Plotly, Vega with unified aesthetics and dark mode support

Homework Help Discord Bot (https://github.com/nicholas-miklaucic/serene-nano) — **May 2021 – Present**

- As server administrator, architect Discord bot for volunteer homework help chatroom (1,700+ members)
- Integrate external libraries and connect with Discord in Rust (rewritten from Python)
- Automatically translate non-English text, allocate points to incentivize contributions, and provide easy ways to link Wikipedia and Merriam Webster to facilitate educational discussion

Interests

Hiking, reading fiction and history, crosswords, strategy games, listening to music