

Nicholas Miklaucic

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Education

Sep. 2019–May 2023

Northeastern University, Boston, MA

Khoury College of Computer Sciences, Honors Program

Candidate for Bachelor's of Science in Data Science & Behavioral Neuroscience

Coursework: Artificial Intelligence, Machine Learning, Genetics, Neurobiology

Technical Knowledge

Languages Python, Rust, Typescript, Java, R, SQL, C++, Haskell, Bash, Emacs Lisp

Libraries PyTorch, TensorFlow, React, Pyro, NumPy, Pandas, Xarray, SciPy

Software Git, Jupyter, Linux, LaTeX, Tableau, Excel

Professional Experience

Generalizable Robotics and Artificial Intelligence Laboratory, Northeastern University

Oct. 2021–Present

Undergraduate Researcher

- Develop reinforcement learning agents that use natural language to achieve SOTA performance
- Train neural networks for multimodal learning using PyTorch and TensorFlow
- Write manuscript for future conference submission (first-author)

Skyhawk Therapeutics

Jul. 2021–Dec. 2021

Co-op Student Intern

- Created and developed machine learning pipeline using PyTorch to correct experimental artifacts in gigabytes of genomics data
- Built bespoke, interactive web dashboards using Python and JS to visualize output analyses
- Thoroughly reviewed existing bioinformatics literature to implement and improve on existing algorithms

Publications

- Kopec, M., Magnani, M., Ricks, V., Torosyan, R., Basl, J., **Miklaucic, N.**, Muzny, F., Sandler, R., Wilson, C., Wisniewski-Jensen, A., Lundgren, C., Baylon, R., Mills, K., & Wells, M (2023). The Effectiveness of Embedded Values Analysis Modules in Computer Science Education: An Empirical Study. *Big Data & Society* (accepted for publication) <https://doi.org/10.48550/arXiv.2208.05453>
- 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

AISpell | github.com/nicholas-miklaucic/aispell-app

Mar. 2023–Present

- Build software using language and keyboard modeling to intelligently spell check documents
- Implement latest language models in Rust to determine user intent (2500 lines of code)

Constellate | github.com/constellate-org/constellate | rho.vercel.app

Dec. 2021–Present

- Build open-source web publishing platform for Jupyter notebooks using React, Python (8000 lines of code)
- Write essays on various topics, including [using AI language models to understand gendered names](#)
- Fashion a cohesive design system for web, Matplotlib, Bokeh, Vega with comprehensive dark mode support

Homework Help Discord Bot | github.com/nicholas-miklaucic/serene-nano

May 2021–Present

- As server administrator, architect Discord bot in Rust for volunteer tutoring server with over 1000 members
- Automatically translate non-English text, allocate karma to incentivize contribution, and much more
- Build a [custom math expression parser in Rust](#) to make LaTeX more accessible to students

Interests

Hiking, reading history books, crosswords, playing strategy games