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

Constellate | https://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 | https://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

AISpell | https://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)

Interests

Hiking, reading history books, crosswords, playing strategy games