Porter Glines

208-380-2898

Education

May 2022 — **Masters of Computer Science | Idaho State University**

- 4.0 GPA, *Phi Kappa Phi*
- Thesis: *Imposing Structure on Generated Sequences: Constrained Hidden Markov Processes*
- Graduate Teaching Assistantship Grant 2020-2022
- Outstanding Graduate Student 2021-2022
- Related coursework: Computational Theory, Software Testing, Empirical Software Engineering, Advanced Algorithms, Machine Learning, Compilers, Operating Systems, Systems Analysis and Design

Dec 2019 — **Bachelor of Computer Science | Idaho State University**

- Graduated ***cum laude*** with a minor in ***Mathematics***

Experience

Fall 2019 - May 2022 — **Research and Teaching Assistant | Idaho State University**

- I was a research and teaching assistant to Dr. Paul Bodily for multiple courses including: Computational Theory and Machine Learning (tutored for upper-division and graduate level courses).

Sept 2016 - Oct 2019 — **IT Student Supervisor | Idaho State University**

- I supervised and trained IT Support Technicians at ISU and retained an in-depth knowledge of Windows and MacOS to support users across the entire campus.

Projects *(hosted on GitHub)*

Constrained Hidden Markov Model (Master's Thesis)

- A model for constrained sequence generation written in **Rust**. Performance is 10x over a previous python implementation and high test coverage. For my thesis, I **generated musical sequences** styled after Bach's Chorales. Generated music compared favorably against an Anticipation-RNN (neural network) in an IRB-approved survey.

Mnemonic Device Generator using a constrained Markov chain

- A **C++ multi-threaded** program generates mnemonic devices and communicates through IPC to a Django server to serve a frontend. I presented this project at ICCC's 2019 conference in North Carolina.

Publications

Glines, P., Griffith, I., & Bodily, P. M. (2021). Software Design Patterns of Computational Creativity: a Systematic Mapping Study. *Proceedings of the 12th International Conference on Computational Creativity*, pages 218-221.

Glines, P., Biggs, B., & Bodily, P. M. (2020). A Leap of Creativity: From Systems that Generalize to Systems that Filter. *Proceedings of the 11th International Conference on Computational Creativity*, pages 297-302.

Glines, P., Biggs, B., & Bodily, P. M. (2020). Probabilistic Generation of Sequences Under Constraints. *Proceedings of the 1st Intermountain Engineering, Technology, and Computing Conference*, pages 135-140.

Bodily, P. M., Glines, P., & Biggs, B. (2019). "She Offered No Argument": Constrained Probabilistic Modeling for Mnemonic Device Generation. *Proceedings of the 10th International Conference on Computational Creativity*, pages 81-88.

Fields of Interest

- Computer Science, Machine Learning, Horticulture, Mountain Biking, Snowboarding, Backpacking

Personal Information

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- 1608 S. Von Elm St. Pocatello, ID. 83201
- https://github.com/po-gl

Languages

- Python
- Rust
- Java
- Swift
- C++
- JavaScript

Skills / Familiar With

- Scrum
- Clean Code
- Test-driven Development
- Vim
- UNIX command-line
- Microsoft PowerShell
- BASH Scripting
- Windows Operating system and deployment tools
- MacOS
- SQL
- LaTeX
- Academic Conference Reviewing