Porter Glines

208-380-2898 | porterglines@gmail.com

Education

Master of Computer Science | Idaho State University
May 2022 | Pocatello, ID

4.0 GPA, Phi Kappa Phi

Thesis: *Imposing Structure on Generated Sequences: Constrained Hidden Markov Processes*

Graduate Teaching Assistantship 2020-2021 and 2021-2022

Outstanding Graduate Student 2021-2022

Coursework: Computational Theory, Software Testing, Empirical Software Engineering, Advanced Algorithms, Machine Learning, Compilers, Graphics, Quantum Programming

Bachelor of Computer Science | Idaho State University
Dec 2019 | Pocatello, ID

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

Experience

Research and Teaching Assistant | Idaho State University
2019 - 2022 | Pocatello, ID

Collaborated on generative models in *Python* and *Rust*. Tutored and graded for upper-division and graduate courses, including *Computational Theory*, *Advanced Algorithms*, and *Machine Learning*.

IT Student Supervisor | Idaho State University
2016 - 2019 | Pocatello, ID

Validated and updated PowerShell scripts to facilitate labs' transition to Windows 10. Supervised and trained IT Support Technicians at ISU and retained an in-depth knowledge of Windows and MacOS to support users across campus.

Projects *(hosted on GitHub)*

Constrained Hidden Markov Model *(Master's Thesis)*
Written in *Rust* with high test coverage. Performance is *10x* over a previous Python implementation. *Generated musical sequences* styled after Bach's Chorales. Generated music compared favorably against an Anticipation-RNN (recurrent neural network) in an IRB-approved survey.

Mnemonic Device Generator using Markov chains
C++ multi-threaded program generating natural language mnemonic devices. Communicates through IPC to a *Django* backend that serves a dynamic frontend — presented at ICCC's 2019 conference.

Pomodoro: iOS/watchOS Tasks and Focus Timer App
Models the Pomodoro technique developed by Francesco Cirillo. Utilizes unique UI to drag and drop tasks to an interval timer progress bar. Uses Apple's declarative *SwiftUI* framework and *CoreData*.

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.

Links

github.com/po-gl

linkedin.com/in/porter-glines

porterglines.com

Languages

Python

Rust

Go

Swift

C++

JavaScript

Skills / Familiar With

iOS Development

Machine Learning

Agile / Scrum

Clean Code

Test-driven Development

Vim

CI/CD

Unix command line

Bash Scripting

MacOS and Windows

SQL

LaTeX

Academic Conference Reviewing