Preston Pan

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Projects

Note – *All my projects have their respective soure code avaiable at* https://git.nullring.xyz *and* https://github.com/ret2pop

- **Snake3** – Although this was a small project, it showcases my skills at writing man pages in the roff format and my ability to come up with novel algorithms, as well as working with threading in the C programming language. It's a simple snake game in the terminal that works without the curses library. It was also a collaboration with Kai Stevenson: https://kaistevenson.com. You can view the source code from https://git.aberrantflux.xyz/snake3.git/.

- **NoExcess** – NoExcess is a fully featured turing complete programming language that I have written. It is heavily inspired by scheme, and like scheme, it is a functional programming language. It was made to have a simple set of built-in functions, and a builtin way to declare variables and functions. Float, integer, boolean, and string datatypes are also supported along with the list, function and symbol datatypes, just like in other lisp-like languages.

- **Stem** – Stem is a concatenative programming language that I have also written. It was inspired by forth, and it has a featureful set of builtin functions as well as a standard library and a metaprogramming system. It also has a foreign language interface (FLI) which allows one to program libraries in the C programming language in order to extend its capabilities.

- **Stepone** – Stepone aims to be a low level programming language with reduced and easier to read syntax compared to C. The parser is complete for it and it is available on github: https://github.com/ret2pop/stepone.git

- **The Null Webring** – The Null Webring is a webring that I run which has an associated website: https://nullring.xyz.

- **The Null Identity** – An organization that I created that focuses on explaining science and technology from a satirical-pseudoreligious context, with an associated website: https://society.nullring.xyz. I wrote the website with a primitive templating language/static site generator in pure POSIX shell script which generates the website from simpler template and data files.

Skills

- **Radio** – I have my Basic amateur radio license, callsign VE7PPN; useful for testing radio related equipment.

- **Systems** – Extensive knowledge of operating systems such as GNU/Linux, OpenBSD, NetBSD, and 9front/plan9, as I have used all of these systems as daily drivers on my personal machine and as servers.

- **Sysadmining** – I sysadmin my own server where I host multiple websites, an email server, git server, and more. As a result, I have knowledge of many standard tools for sysadmining (docker, ssh, common servers and daemons) and have knowledge of many different operating systems.

- **Programming Languages** – I have good knowledge of c, python, shell, x86 assembly, and HTML/css/Javascript. I can learn new programming languages as needed.

- **Development tools** – Knowledge of standard collaborative development tools (command line git, writing UNIX man pages, using build systems like make/cmake/autotools) as well as writing papers in LaTeX and roff.

- **Mathematics** – I have knowledge of mathematics up to about a 3rd year university level due to self study, and have gotten distinction in mathematics contests such as the Fermat Waterloo math competition (knowledge of multivariable calculus, linear algebra, discrete mathematics, and ordinary differential equations, among other topics). This has enabled me to learn many theoretical concepts related to physics and computer science on my own.

- **Music** – I've been playing piano for more than 10 years in total. I have samples of my piano improvisation, singing, and cello on my youtube channel: https://www.youtube.com/channel/UCqSzPHVhA4ElGm3i0baVrEQ

Education

2023 - now	**Univserity of Victoria** – Victoria, BC