§ Coranna Howard

A programmer and artist from the Seattle, Washington area, Coranna is skilled in technical writing, vocational teaching, data architecture & reverse-engineering, modern computer graphics systems, software repackaging, and the design & implementation of low-level APIs.

§ professional work

¶ Pierce College — Lakewood, WA, U.S.A.

» **2017–*present*** — Computer Clubhouse Specialist

Led learning activities and maintained technology in an after-school program at Lochburn Middle School.

¶ self-employed — Tacoma, WA, U.S.A.

» **2014–*present*** — personal, gigs

Developing Quanta and togo, tackling gigs in a medley of fields, helping fellow programmers, running amok with far too many crafts, opinionating on tech culture, and learning new sub-fields.

¶ Austin Powder — Cleveland, OH, U.S.A.

» **2011–2014** — software repackaging

Architect of packaging methodology & repository of 675+ packages (approximately 211 products across 75 vendors) for a network of 850 Windows computers. Documented methodology & structure and taught the art of repackaging. Wrote utilities for IT in VC++, JScript, and CMD.

» **2008–2009** — IT

Three small contracts for hardware and software deployments. Built cross-platform software to track assignment & progess of deployments and to allow the project manager to securely share user info with the technician.

» **~2005–2008** — IT

Numerous small jobs to keep the gears turning: utility software (in C♯, C++, Visual Basic 6.0 + .NET, BlitzMax, JScript/WSH, and Windows CMD), software & hardware deployment, documentation, and user support.

§ www

email	me@komiga.com
github	github.com/komiga
website	komiga.com / resume
updated	2017-11-10

§ skills

C, C++, C♯	CMake, Premake
Lua, Python	Linux, POSIX
Java, HTML	Windows, WinAPI
Clang, GCC	Visual Studio
Bash, CMD	Excel, GSheets
OpenGL, LÖVE	Blender, GIMP
GLFW, SDL	MSI, InstallShield
git, GNU Make	Android SDK

§ volunteer work

¶ Linux videogame QA

» **'12–'14** — Humble Inc., 17 games
» **'12** — Santa Ragione, Fotonica
» **'12** — Subsoap, Faerie Solitaire

¶ scientific research

» **'15–*present*** — HCI thesis on trans people and speech training *(identity withheld to prevent deanonymization)*

§ background

» **'13–'14** — *Algorithms, Part II*
» **'13 × 2** — *Algorithms, Part I*
» **'11** — *Repackaging and Application Migration using AdminStudio 9.5*
» **post sec., CS** — autodidact
» **K-12** — autodidact / homeschool
» **English** — *C1-C2*, U.S.–U.K. hybrid
» **French** — *A1*, Standard/Metro.
» **Japanese** — *sub-A1*, Eastern

§ portfolio

- » **'16** — sounds for contemplating the universe, a soundtrack for stargazing *(Fermi Paradox Jam)*
- » **'14** — Kaleidograph *(stills)*, an interactive generative art program *(JavaScript, p5.js)*
- » **'14** — Onomo, a slow, dark platformer concept *(Ludum Dare 30, Lua, LÖVE, 34.7h)*
- » **'13** — Prisma, a color-based twitch puzzler *(Ludum Dare 26, Lua, LÖVE, 35.1h)*

§ code

- » togo, app & game super-library *(C++, Lua)*

  - Data-oriented design, open types, open interfaces.
  - Digestible alternative to the C++ Standard Library.
  - Game engine (WIP) with pipeline tooling.
  - Imaging and windowing.

- » Quanta, adaptive tracking toolkit *(C++, Lua)*

  - Expressive time and nutrition tracker, WIP Android companion.
  - Universal description language (English read- & write-able).
  - Extendable, rapid-iteration tooling and data analytics with Lua.
  - Linux integration (CLI tools, data vessels).

- » Pickle, static site generator *(C++, Lua)*

  - Non-dogmatic; user controls structure.
  - Lua-based template language and userspace.
  - Bare-bones web server for rapid iteration.

- » precore, Premake 4.4 extension *(Lua)*

  - Modularity & reusability layer atop Premake.

- » igen, C++ interface generator *(Python)*

  - Generates function declarations (preserving docs) from their implementations using libclang.

- » include_sort, C & C++ #include sorter *(Lua)*

  - Sorts #include statements in user-defined order.

§ contributions

- » mooege,[†‡] *Diablo III* server *(C♯, '11)*

  - Networking (Battle.net, game layer), game world, Linux support.
  - Asset RE, packet RE, Protocol Buffer implementations, documentation.
  - Designed prospective production-grade server architecture.
  - Later: PR arbiter/project manager, working with many important contributors.
  - Co-architect alongside Hüseyin Uslu.

- » ParkPoints, gamified park participation app (for the *Parks and People United Through Technology* hackathon by Metro Parks Tacoma, **'17**)

  - Joint with Andrew Dickinson, Grace Bergman, Jasmine Scott, Krystaal McClain, and Robin Choi.

- » spirv,[†] binary SPIR-V codec *(Go, '15)*

  - Implementation of the provisional specification.
  - Contributed fixes upstream (to Khronos).
  - Co-architect alongside Jim Teeuwen.

- » Maximus,[†] module manager *(BlitzMax, '10)*

  - Core architecture and command-line client.
  - Joint project with Christiaan Kras, who maintained GUI client & web service.

- » Pygments *(Python)*
- » libc++ *(C++)*
- » GLM *(C++)*
- » gltext *(Go)*
- » SPIR-V Specification (provisional)
- » Golang Specification
- » Elixir Getting Started tutorial

† — Defunct.   ‡ — Commit history.