~ **Alex Garnett** axfelix@gmail.com https://github.com/axfelix http://webambler.com

Work

DigitalOcean, Senior DevOps Technical Writer; 2021-Present

- Authored and edited public-facing server tutorials to drive product growth.
- Contributed to curriculum development and developer education initiatives.
- Provided support and scoping expertise to the marketing team.
- Helped overhaul content maintenance process using analytics data.
- Maintained interactive browser terminal stack.
- Organized local events for a remote-first team.

Simon Fraser University, Digital Preservation and Data Curation Specialist; 2012-2016.

-> Research Data Management and Systems Librarian; 2016-Present.

- Served as the lead analyst for, deployed, managed, supported users of, wrote policies around, and eventually migrated our research data repository platform.
- Implemented data discovery and data encryption interfaces at a national level in Canada through consultation with stakeholders across universities and in government.
- Designed command line, web, and desktop tools for supporting preservation workflows and contributed to best practices locally around digitization and retention of audiovisual media.
- Worked with research computing and HPC on scaling up capacity; handled VPS infrastructure for university archives and provided guidance to researchers around hosted services.
- Liaised with external partners on open source collaborations in digital publishing.
- Performed web archiving at various levels; crawling, screen-scraping.
- Imaged, migrated, and emulated legacy media from Macintosh and non-Macintosh disks.
- Developed an accessible workflow for theses; redacting documents, correcting encodings.
- Created automated testing and evaluation pipelines for experimental and production code.
- Helped local independent vendors adopt MediaArea tooling for lossless film transfers.
- Supervised software developers and RAs; created and maintained project roadmaps.

SocialFlow, Data Scientist; 2012.

- Performed social network analysis of real-time Twitter data for impact maximization.
- Wrote Hadoop queries and pitched media organizations.

City of Vancouver Archives, Digital Project Archivist; 2011.

- Cleaned up and re-structured archival records database; refined user specifications.

NextWerk vTeams, Development Coordinator; 2009.

- Acted as the server technician and client liaison for a distributed web development team.

Education

University of British Columbia, MLIS; 2009-2010.

University of Connecticut, BA, Cognitive Science and Linguistics; 2006-2009.

How to Identify and Remediate Disclosure Risk, **ICPSR**; 2018.

Selected Publications and Presentations

Garnett, A. (2022). Learning to Love Your Terminal. *DigitalOcean.* https://www.digitalocean.com/community/conceptual_articles/learning-to-love-your-terminal.

Garnett, A. (2022). How To Write a Serverless Function. *DigitalOcean.* https://www.digitalocean.com/community/tutorials/how-to-write-a-serverless-function.

Garnett, A. (2022). How To Deploy and Configure Meilisearch on Ubuntu. *DigitalOcean.* https://www.digitalocean.com/community/tutorials/how-to-deploy-and-configure-meilisearch-on-ubuntu-22-04.

Garnett, A. (2022). How To Use minikube for Local Kubernetes Development and Testing. *DigitalOcean.* https://www.digitalocean.com/community/tutorials/how-to-use-minikube-for-local-kubernetes-development-and-testing.

Garnett, A. (2022). How to Set Up a Video Streaming Server using Nginx-RTMP. *DigitalOcean.* https://www.digitalocean.com/community/tutorials/how-to-set-up-a-video-streaming-server-using-nginx-rtmp-on-ubuntu-20-04.

Berger, A., Garnett, A., Kaltman, E., Masinter, L., Schwaid-Lindner, W., Rampin, V., and Weber, N. (2021). Reference Guide to Emulation. *Software Preservation Network.* https://cocky-keller-94bd84.netlify.app. (URL to change)

Garnett, A., and Zhang, J. (2020). Lightweight Zero-Knowledge Encryption for Repository Deposit of Sensitive Data. *DLF Forum.*

Stathis, K., and Garnett, A. (2020). Making a Harvester Harvestable: Federating an OAI endpoint directly from Postgres. *Access Conference.*

Garnett, A. (2020). Aesthetic Trends of Compression Artifacts. *We Miss iPres.* https://youtu.be/-EH63I_VXZY?t=756

Garnett, A., Wilson, L., Turp, C., and Pascoe, J. (2019). The Fast and the FRDR. *Open Repositories.* https://www.mdpi.com/2304-6775/8/2/25

Qasim, U., Davis, C., Garnett, A., Marks, S., and Moosberger, M. (2018). Research Data Preservation in Canada: A White Paper. *Portage Network.* http://hdl.handle.net/2429/67130

Garnett, A., Winter., M., and Simpson, J. (2018). Checksums on Modern Filesystems, or: On the Virtuous Consumption of CPU Cycles. *iPres.* http://www.sfu.ca/~garnett/ipres18.pdf

Castro, E., Crosas, M., Garnett, A., Sheridan, K., and Altman, M. (2017). Evaluating and Promoting Open Data Practices in Open Access Journals. *Journal of Scholarly Publishing.* https://utpjournals.press/doi/abs/10.3138/jsp.49.1.66

Garnett, A. and Trann, T. (2017). The Canadian Federated Research Data Repository: A Modestly Large Collaboration. *Open Repositories.* Brisbane, AU.

Garnett, A., Aufreiter, M., Buchtala, O., and Alperin, J.A. (2017). Introducing Texture: An Open Source WYSIWYG Javascript Editor for JATS. *JATS Conference.* Bethesda, MD. https://www.ncbi.nlm.nih.gov/books/NBK425544/

Trann, T. and Garnett, A. (2016). Building a Scalable National Repository Infrastructure for Canada. *CANHEIT.* Edmonton, AB.

Garnett, A. and De Meo, M. (2016). Using a GPU to Accelerate Digital Preservation Workflows. *Open Repositories.* Dublin, IE. http://www.sfu.ca/~garnett/or16.pdf

Garnett, A. and Graebner, C. (2015). Evaluating the Suitability and Sustainability of "Local Dropbox" Solutions to Complement a Research Data Repository. *Open Repositories.* Indianapolis, IN.

Garnett, A. (2015). OMERO: File-level preservation for natural scientists. *IASSIST.* Minneapolis, MN.

Castro, E., and Garnett, A. (2014). "Building a Bridge Between Journal Articles and Research Data: The PKP-Dataverse Integration." *The International Journal of Digital Curation.* https://dx.doi.org/10.2218/ijdc.v9i1.311

Garnett, A., Lee, G., and Illes, J. (2013). "Publication Trends in Neuroimaging of Minimally Conscious States." *PeerJ.* https://peerj.com/articles/155/.

Willinsky, J., Garnett, A., and Pan-Wong, A. (2012). "Refurbishing the Camelot of Scholarship: How To Improve the Digital Contribution of the PDF Research Article." *Journal of Electronic Publishing.*

Siemens, R., Timney, M., Leitch, C., Koolen, C., and Garnett, A. (2012). "Toward Modeling The Social Edition: An Approach To Understanding The Electronic Scholarly Edition In The Context Of New And Emerging Social Media." *Literary and Linguistic Computing.*

Garnett, A., Whitworth, E., and Fazzio, S. (2012). Doctor Who meets Doctor Zhivago: Modeling Serendipity on Extreme Divergence. *CSCW 2012 Workshop on Design, Influence, and Social Tech.*

Nathan, L. and Garnett, A. (2011). Privacy Research & Real-World Design: Is there an Elephant in the Room? *CHI 2011 Workshop on Privacy for a Networked World.*

Garnett, A., Whiteley, L., Piwowar, H., Rasmussen E., and Illes, J. (2011). "Neuroethics and fMRI: Mapping a Fledgling Relationship." *PLoS ONE.* http://dx.plos.org/10.1371/journal.pone.0018537

Schneider, O. and Garnett, A. (2011). ConsentCanvas: Automatic Texturing for Improved Readability in End-User License Agreements. *Association for Computational Linguistics Conference.*

Teaching

- **Introduction to Python Programming.** Taught annually+ since 2014, through the SFU Research Commons, Code4Lib BC, Software Carpentry, and the UBC Digital Humanities Salon.

- **Introduction to Shell Scripting.** Taught in 2015 through Code4Lib BC.

- **Introduction to Text Parsing and Regular Expressions.** Taught in 2016 through SFU Library Research Bazaar.

- **Introduction to Data Security.** Taught several times annually since 2017, through the SFU Research Commons, based on curricula developed from EFF materials by Jessica Gallinger.

- **Research Data Management**, UBC iSchool guest lecture.

- **Information Technology and Archives**, UBC iSchool guest lecture.

Working Groups

Compute Canada - Discovery Working Group, Preservation Expert Group, Curation Expert Group

AtoM 3 Roadmap Committee

Access Conference 2020-2021 Organizing Committee

Software Preservation Network Technological Infrastructure Group

Skills and Miscellanea

- Fullstack software development, preference for Python/SQLite, expertise in text parsing
- Quickly prototyping web or desktop apps, primarily using Flask and Electron
- Hacking of deprecated interactive media for display or retention
- Dataset training, modeling and visualization using Tensorflow, R, and D3
- Database and server management and general dev ops provisioning (Docker, zsh, Rails, Nginx)
- Knowledge of, opinions about, querying and indexing of common metadata standards
- Service on hiring committees of junior and senior colleagues
- Participating in RFP processes guided by government privacy and purchasing requirements
- Editorial process management through Jira
- Experience with basic 3D modeling for printing
- Microcontroller breadboarding and low-level I/O for digital forensics
- Creating and maintaining documentation using static sites and video tutorials
- Podcast audio production (spectral editing) and livestreaming
- Lua scripting for game development and presentation
- Cross-platform (Windows/Mac/Linux/Android/iOS/HyperCard/etc.) porting and support

Grants and Residencies

ASIS&T New Leaders Grant, 2010

Society for Scholarly Publishing Early Career Award, 2011

Stanford MediaX Publish-on-Demand Competition, 2012

Canadian Internet Registration Authority Community Investment Program, 2015

Nvidia Research Hardware Grant, 2016

SFU University Priorities Fund Recipient, 2019

Recurse Center (Winter 2), 2021