

Matthew Alan Dunlap | Resume

Contact Information:

Email: madunlap@email.unc.edu

Education:

MSc in Computer Science (Human Computer Interaction Program)

School: University of Calgary

Topic: Science Caching: Applying Geocaching to Mobile Citizen Science

Advisors: Drs. Saul Greenberg & Anthony 'Tony' Tang

Graduation: June 2013

BSc in Computer Science

School: Christopher Newport University

Graduation: May 2009, *cum laude*

Summary of Software Knowledge Areas:

Java, Django, Python, Unix, SQL, JavaScript, JSF, JUnit, Web APIs, Bash, AWS, Salesforce, Git, Solr, Perl, PHP, C#, Arduino, Android, Maven, Beanshell, Docker, Vagrant

Selected Work Experience:

UNC Chapel Hill Odum Institute – Systems Programmer (December 2019 – Present)

- Lead developer for CoReRe, a Django web application to assist data curation and verification by encapsulating research data and code/allowing that encapsulated content to be run through various curation workflows.

Harvard Medical School – Integration Developer (April 2019 – December 2019)

- Short-term position helping SBGrid Consortium develop their web infrastructure, improving their Django web application used for outreach, CRM and software provisioning. Focusing on integrating their current system with Salesforce through data migration and connector-based syncing.

Harvard University – Data Science Developer (July 2017 – April 2019)

- Full-Stack Java EE/JSF development for Dataverse, a long running open-source research publication data repository created at Harvard University. Development of a variety of features including AWS S3 storage support, standardized data access analytics, batch downloading, large file uploading, Solr search and user-facing APIs.
- Additional development of Dataverse integrations, including the DCM Rsync Uploader (Python) and the Dataverse EC2 Instance Creator (bash).
- Agile development with a core team at Harvard along with a constantly growing/changing community of developers worldwide. Collaborative design and implementation via constant collaboration and git tools (<https://github.com/matthew-a-dunlap>).

Harvard University – Senior Software Developer (August 2014 – June 2017)

- Java Spring development for Harvard’s unified online user credential, Harvard Key. Worked on functionality surrounding authentication, service opt-in functionality and two-step verification. Both front end UI work and middle-tier business logic.
- Development for Harvard’s central account provisioning system (IdentityIQ) which manages over 900k user records. Work included creation of two custom application connectors and complex account lifecycle logic.
- Constant participation in discussion surrounding design for Harvard University’s complex user identity space, based around the needs of Harvard’s various schools and administration.

Christopher Newport University – Systems Technician (April 2008 – February 2009)

- Set up and installed Windows computer systems, answered help calls, created backups and performed updates.

Further Software Development Experience:

Masters Thesis Development – Science Caching

- A highly functioning prototype for assisting volunteers in the collection of environmental data for scientists, written in C# for Windows Phone.
- Developed map navigation (Bing Maps) for directing volunteers to data collection sites.
- Communicated with a Windows Server through a web service (WCF) to upload collected data and to provide volunteers with information on the data collection process.

Music Interface Design

- Creation of Arduino & Lemur/iOS MIDI interfaces for control of music hardware.

Other Experience:

- Publication of thesis research in Springer’s Personal and Ubiquitous Computing Journal (*Applying geocaching principles to site-based citizen science and eliciting reactions via a technology probe*, DOI 10.1007/s00779-015-0837-0)
- Teaching Assistant for Computer Programming in Python (Student Evaluation 4.17/5.00)
- Completed a Thru-hike of the Appalachian Trail, a 6-month, 2178-mile backpack (2009).
- Electronic musician, performing both rhythmic and noise compositions.
- Volunteered with Brain Arts, a live music and culture non-profit in Boston. Event hosting and running sound.