Katherine Shaw Reeber

katherine.reeber@gmail.com | (770) 630-3080

I'm a full-stack engineer who builds information-rich web tools to connect people with exactly the knowledge they need. I believe that privacy and access to information are fundamental human rights; that accessible web design is digital hospitality; and that there's an HTTP status code for any situation.

Relevant Experience

Software Engineer, Collaboration Tools, *Apple Inc*   October 2017–present

- Current: Technical lead developing dashboards for visualization and analysis of operational data
- Designed, created, and administered a data warehouse for division-level reporting, including data transformation pipelines to combine and normalize data from nine distinct sources of headcount, space planning, and course completion data
- Defined detailed user requirements for an internal OKR tool, incorporating goal-setting, status updates, and historical reporting, based on user interviews and analysis of existing documents
- Created metadata schema and prototype website for the division's engineering documentation, using a NodeJS-based build toolchain with a lightweight Lunr search implementation and custom metadata management plugins to collate metadata from a tree of Git submodules
- Launched a knowledge management working group to develop a standardized taxonomy and a taxonomy management tool for all documentation and training materials for the division
- Administered Confluence and Jira for 3000-person organization, within a shared instance, and became the primary technical expert for all Confluence questions for the division
- Designed and implemented a modular JavaScript library of Confluence scripts to add functionality, like intelligent page templates and automated archiving, and to automate maintenance tasks
- Received Outstanding Contributor award from the project management team of a 1000-person organization for developing a tool to automate their weekly status rollup (designed and launched in two weeks)
- Managed deployments for the Apple Machine Learning Journal (Oct 2017–Nov 2019) using a Dockerized web server deployed on an internal Kubernetes-like Platform-as-a-Service system

User Experience Design Intern, Data Visualization, *SAS*   Spring 2017

- Delivered updated design specs for animated charts in Visual Analytics, based on published research and the analysis of previous internal usability studies
- Developed custom JavaScript module examples to demonstrate integration options in Visual Analytics

IT Help Desk Assistant, *UNC School of Information and Library Science*   August 2015—May 2017

- Deployed and maintained custom SharePoint components for communication & project management
- Maintained and upgraded classroom and lab technology, including creating and applying Windows 10 images for the department's complete migration from Windows 7
- Mentored junior help desk assistants, including training for addressing common user requests and for working with Unix-based systems
- Refactored faculty member's legacy PHP applications to close security holes
- Resolved technical problems for students, faculty, and staff

Education

MS in Information Science, *University of North Carolina at Chapel Hill*   May 2017
- Master's Project: Visualizing Gender Diversity in Technology

MA in Linguistics, *UNC Chapel Hill*   August 2013
- Master's Thesis: Head Faithfulness in English Lexical Blends

BA in Linguistics, *UNC Chapel Hill*   December 2011

Selected Projects

The Book Hoard
Web-based interface for a personal digital library. Provides consolidated access to ebooks and journal articles. Ongoing personal project, including:

- REST API to enable web access to a Calibre ebook database (Express/NodeJS + SQLite)
- Integration with the Zotero API to include library entries for academic references
- Faceted taxonomy, with mapping between Calibre and Zotero tags
- Responsive web interface for library browsing (HTML, CSS, Web Components)
- Authentication-gated downloading and read/listen-in-browser functionality

S'gaw Karen / English Dictionary
Online dictionary of S'gaw Karen vocabulary, based on field notes gathered by UNC linguistics students. Primarily used by PhD students whose dissertations included linguistic data from S'gaw Karen. Grew out of a databases course project.

- Converted an Excel spreadsheet of linguistic field notes into a vocabulary database with phonological, morphological, and semantic notes
- Developed a basic web application to allow PhD researchers to search the database
- First created as a PHP application backed by an Oracle database to satisfy course requirements; later ported the database to SQLite, to enable hosting on a basic web server in the linguistics department

Help Desk Equipment Reservation System
Prototype web app for reserving the Help Desk's lendable equipment. Course project for Web Information Architecture.

- Defined a JSON-LD schema to model the equipment collection and reservations, based on schema.org entities
- Hand-coded a Flask (Python) server to create and manage reservations. All HTML pages included microdata annotations, and the app included an API to query the JSON-LD records directly

Selected Programming Languages

Proficient		Familiar	
HTML	SQL	Python	R
CSS		PHP	Docker
JavaScript (browser and Node)		JavaScript build tools & frameworks including TypeScript, Vue, React, Webpack	