

Interests

Modern Europe ♦ Cultural History ♦ Spatial History
Computer Vision ♦ Network Analysis ♦ GIS
Web Programming ♦ Web Scraping ♦ Data Visualization

Published

Content Based Image Recognition for Early Modern Images <http://ds.lib.ucdavis.edu/archv/>
French Men and Women in the German Wehrmacht and Waffen-SS <http://malgrenous.net>

Awards

Highest Honors in History SPRING 2017
Most Innovative Thesis Award SPRING 2017

Education

Bachelor of Arts, double major History and Economics

University of California at Davis
DAVIS, CA, USA SEPTEMBER 2013 - MARCH 2018

Minor, Computer Science

University of California at Davis
DAVIS, CA, USA SEPTEMBER 2013 - MARCH 2018

Skills

C, C++	Javascript	MySQL
Python	HTML5, CSS3	OpenCV
Unix	PHP	d3.js, leaflet.js
Java	Jetty, Apache	QGIS

Experience

Malgrenous.net

Author JUNE 2017 - CURRENT

Ongoing web project of my research on the Malgre-Nous.

- Developed a large scale web project with visualizations using Matlab and jQuery
- Presents an overview of the experience of the Malgre-Nous during World War Two
- Over 12,000 points georeferenced from archival sources in French, Russian and German
- Dynamic visualization of the points along with Front line changes for two week periods
- Mapped out key events from the memoir of Bernard Huffschmitt
- Substantial quantitative analysis comparing casualty rates for the Malgre-Nous with the overall German Army

Data Science Initiative - UC Davis

Research Assistant JANUARY 2015 - CURRENT

Lead my own digital humanities projects as well as collaborated with faculty for their data science needs.

- Designed and developed Archv - *a content based image recognition software for Early Modern works*. Written in Cpp and built on the OpenCV library.
- Created a web application to allow users to interface with Archv. Built a RESTful API using Jetty, created the main pages with Javascript and PHP.
- In charge of a variety of updates to the English Broadside Ballad Association's website, including incorporating Archv on the imageset.
- Worked with Vessela Ensberg of the Data Management Program at the UC Davis library on a webscraping and data analysis project to track organizations that host UC Davis academic work.

History Senior Thesis - UC Davis

Author

JANUARY 2015 - CURRENT

Senior Thesis on the Malgre-Nous, advised by Professor Adam Zientek and Professor Greg Downs

- Used Leaflet.js and QGIS to dynamically visualize casualties during key campaigns during World War Two
- Took memoirs of Malgre-Nous and mapped significant moments from them alongside casualties
- Demonstrated the presence of Malgre-Nous on every front of the war

Center for Spatial and Textual Analysis - Stanford University

Research Intern

JUNE 2016 - AUGUST 2016

Worked to generate the data and resources necessary for my research on the Malgre-Nous.

- Used Interlibrary Loan and OCR to create a text corpus of Malgre-Nous memoirs.
- Wrote scripts to georeference 12,000 locations of death for Malgre-Nous soldiers from archival records.
- Used Google Maps, Microsoft Excel, and Python to generate visualizations for the data.

Center for Bioimaging Sciences - National University of Singapore

Software Development Intern

JUNE 2013 - AUGUST 2015

Assisted Dr. Alan Davis in a variety of system administration and data analysis projects

- Implemented a comprehensive and customized virtual environment for Python at CBIS. Allowed users to request Python modules and easily change between Python versions.
- Wrote C, C++, and Bash programs to benchmark scientific computing libraries on the CBIS computing cluster (ATIAS, GSL, MKL, Open-Blas, EIGEN).
- Wrote scripts to monitor Cpu and Disk Usage on the CBIS computing cluster as well as tools to analyze the corresponding data.

Department of Biological Sciences - National University of Singapore

Intern

JUNE 2012 - AUGUST 2012

Worked with Dr. John Van Wyhe on his large scale web projects, Darwin-online and Wallace-online

- Transcribed scans of primary source writings from Wallace, especially a collection from South East Asia.
- Used Adobe Dreamweaver to add pages from Darwin's Beagle journey notebooks to Darwin online
- Prepared thousands of photos to be added on both websites.