

Michael O'Mahoney

Software Engineer

WORK EXPERIENCE

MJVO Consulting | Washington, DC

Software Engineer

October 2023 — Present

Create full stack web applications and static websites for different clients across small and medium sized businesses.

- Automated ordering process for bakery by developing and hosting online portal, reducing manual phone orders by 40% as well as lowering order wait times, and error rate
- Integrated an advanced honeypot spam prevention mechanism, improving website security and reducing spam-related inquiries by 80%, allowing the client to focus on genuine customer needs.
- Designed the company logo and developed branding strategy for a professional photographer; this led to a 30% reduction in unattributed image use.
- Facilitate requirements gathering meetings, and drafted project scope of work for stakeholder approval, leading to high client satisfaction.
- Employed Agile methodologies with a small team to prevent project overages.

Smithsonian Institution | Washington, DC

Software Engineer / Project Coordinator

October 2017 — September 2023

- Optimized and deployed a custom software module leveraging pandas and Conda on a high-performance computing cluster; this enabled rapid identification of thousands of BLAST results, reducing data processing times and positively impacting research workflows.
- Implemented and documented a genome assembly workflow using Python, BASH, R and statistical packages that reduced analysis time by 200%.
- Independently wrote yearly technical reports highlighting the research generated from internal and external collaborations in order to maintain interagency compliance with federal funding agencies.
- Trained classifier using scikit-learn and curated data scraped from 2 genomic databases that classified 80% of unidentified species in metagenomic samples.
- Managed our field information management system, GEOME, and ensured data fidelity across 37 projects and 16,000 genomic samples in the database.
- Instructed four Data Carpentries workshops, educating over 100 learners in the use of R, ggplot2, Python, SQL, and Excel in data analysis and visualization.
- Awarded a yearly bonus for exceptional performance for 6 consecutive years.

Museum Technician

December 2013 — September 2017

- Maintained departmental web presence by providing technical and content support across their 30 webpages including staff pages and data products that served 50,000 academic visitors annually.
- Planned institutional migration from Adobe Dreamweaver templates to Drupal content management system with interdepartmental team of stakeholders. Through our coordinated efforts we were able to modernize our web presence for mobile and increase site traffic by 20% in the first year.
- Contributed to the internal collections database, as a Data Manager, and ensured the fidelity of data entered; this resulted in over 29,000 data objects being made publicly accessible and increased collections transparency.
- Awarded a yearly bonus for exceptional performance for 4 consecutive years.

Walter Reed Biosystematics Unit | Washington, DC

Postbaccalaureate Researcher

June 2012 — November 2013

- Supported disease surveillance through the addition of over 6,000 vector occurrences to a geospatial web app, VectorMap; this increased US coverage by 15% and improved CENTCOM outbreak modeling efforts.

CONTACT

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SKILLS

HTML

CSS

Javascript

Node

Express

React

Python

Conda

R

Git

Bash

MongoDB

SQLite

GIMP

Inkscape

OOP

Web Accessibility

Hypothesis Testing

HPCs

Docker/Singularity

EDUCATION

American University

Bachelor of Science

cum laude

Major: Biology

Minor: Neuropsychology