

Michael Toohig

Chambersburg, PA, US | 717-504-3110 | michaeltoohig.com | hello@michaeltoohig.com | github.com/michaeltoohig

PROFESSIONAL SUMMARY

US Citizen with near-decade of experience in full stack software development. Very motivated and confident in new areas, always learning. Strong with writing backend applications, integrating services and writing frontend web applications and PWAs. Confident with DevOps work using Terraform/OpenTofu, Ansible and Docker.

EXPERIENCE

- Owner** | *Independent Contractor* Oct '23 – Present
– Identified clients and helped them discover where I could assist their business operations or provide new customer services, leading to improved efficiency and satisfaction.
– Developed tailored solutions, including scaling information systems, custom software tools, and web applications.
- Project Manager** | *Telsat Broadband* Mar '18 – Mar '24
– Expanded business offerings with Over-The-Top (OTT) services, enhancing customer engagement.
– Developed an API gateway for the subscription management system, preventing vendor lock-in.
– Managed work plans for in-field staff and maintained legacy systems, including FreeNAS and Proxmox servers.
– Developed software solutions for other local businesses on a contract basis.
- Volunteer** | *Peace Corps* Jan '14 – Dec '17
– Migrated PDF & Excel data to databases for the Vanuatu Ministry of Health and Vanuatu National Museum.
– Provided training and support for the use of the Ministry of Education & Training's education management system.

EDUCATION

The Pennsylvania State University | *University Park, PA, USA* | Major GPA 3.7/4.0 Aug '09 – Dec '13
Dual Majors: in B.Sc. in Security & Risk Analysis and B.Sc. in Information Sciences & Technology

PROJECTS

- Offline-First Progressive Web App (PWA)** | *Vue.js, Typescript, IndexedDB, Workbox* Jul '23 – Jan '24
PWA for delivery drivers in remote places
– Developed with Vue.js, utilizing Workbox and IndexedDB for offline functionality.
- Scraping Realtors' Listings & Map** | *Leaflet, Anyio, BeautifulSoup, Directus CMS* Mar '23 – Sep '23
Bespoke web scraper collecting local realtor listings for a GIS application.
– Developed a BeautifulSoup and HTTPX/Requests based web scraping library.
– Designed the database with the intent to preserve historical changes for monitoring purposes.
- Container Tracker** | *Directus CMS, Vue.js, Typescript, Docker, Ansible* Jul '23 – Present
Fleet management system for a local inter-island shipping company.
– Built custom Directus extensions to provide an interface for data entry staff that enforced business logic.
– Thoughtfully designed for expansion to new business areas beyond just fleet management.
- Sabdivisen.com** | *Directus CMS, PWA, Typescript, Tailwindcss, Leaflet, Docker* Feb '23 – Jun '23
Aggregated public data for subdivision sales in Vanuatu.
– Directus CMS backend database with public facing Vue.js and Typescript PWA frontend.
– Light-weight and modern design for poor network conditions.
- API Gateway for Subscriber Management System** | *Flask, SQLAlchemy, Click, Pytest* May '22 – Jul '22
API Gateway to mitigate vendor lock-in.
– Reverse engineered competing product's API and authorization processes.
– Wrote an API gateway to integrate competing vendor's product with the existing subscriber management system.
- 1Nomo** | *Streaming, Transcoding, OBS, Nginx, Flask, Celery, SQLAlchemy* Jan '19 – Aug '20
Platform for operating a linear TV station.
– Automated the process for constructing incremental playlists following user-defined playlist templates.
– Took initiative on expanding the station's live segments by including automated segments for local weather, playlist look-ahead, local COVID-19 updates and more written as Vue.js animated video overlays.
– Developed internal tools for the content library, such as transcoding pipelines, metadata sync with public databases and an administrative web portal built with Flask for video content curators.
– Added support for streaming in parallel to multiple destinations using ffmpeg, STunnel and Nginx.
- Post-STB & NOC Monitoring Systems** | *RaspberryPi, ffmpeg, Python* Oct '20 – Feb '21
Aggregated service and environment monitoring systems.
– Improved time to identify service disruptions by automating live broadcast monitoring.
– Reduced service disruptions and mitigated equipment damage by automated NOC monitoring.
- Rogue Software** | *FastAPI, Celery, Ansible, AWS, Vue.js* Sep '20 – Sep '21
SaaS platform for tour & accommodation bookings.
– Developed a multi-tenant platform with FastAPI and PostgreSQL.
– Automated provisioning of AWS services and deployment with Ansible.
– Integrated local bank's payment gateway into the customer checkout process.

SIDE PROJECTS

- Unofficial Vanuatu Meteorology API** | *FastAPI, BeautifulSoup, Scraping* Mar '23 – Apr '23
– An API for the Vanuatu Meteorology & Geo-hazards Department made with FastAPI and periodic data scraping.
- Vanuatu Energy Dashboard** | *Python, Dash, Computer Vision, OCR, OpenCV, BeautifulSoup* Oct '22 – Jan '23
– Dash app for exploring Vanuatu's electricity costs, fuel consumption and renewable performance from public data.
- Bilolok** | *FastAPI, Typescript, Vue.js, Docker, Ansible, Offline-First PWA* Feb '19 – Nov '21
– Foursquare for kava bars; a full-stack app written with Vue.js, Python and other dockerized services.
- Vanuatu Vehicles** | *ML, FastAPI, Flask, Vue.js, Docker, Ansible, PWA* May '18 – Feb '19
– Yelp for public transport; database gathered via dashcam with custom ANPR pipeline and PWA app for browsing.