

# Michael Toohig

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## PROFESSIONAL SUMMARY

Experienced Software Developer with a decade of experience, transitioning from solo-developer turned contractor in the South Pacific, and now returned to the USA. Skilled in full-stack web development, DevOps and a knack for adapting to various roles. Seeking challenging opportunities to leverage my skills and contribute to innovative projects.

## 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 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* Aug '09 – Dec '13  
B.Sc. in Security & Risk Analysis
- The Pennsylvania State University** | *University Park, PA, USA* Aug '09 – Dec '13  
B.Sc. in Information Sciences & Technology

## PROJECTS

- Offline-First PWA** | *Vue.js, Typescript, IndexedDB* Jul '23 – Jan '24  
*PWA for delivery drivers in remote places*
- Developed with Vue.js, utilizing Workbox and IndexedDB for offline functionality.
- Map of Aggregated Realtors' Listings** | *Leaflet, Async Python, 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 intent to preserve historical changes for monitoring purposes.
- Container Tracker** | *Directus CMS, Vue.js, Typescript, Docker, Ansible* Jul '23 – Present  
*Fleet management system for local inter-island shipping company.*
- Built custom Directus extensions to provide an interface for data entry staff which 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 subdivisions sales in Vanuatu.*
- Directus 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  
*Managed seamless integration of a new subscriber management system to mitigate vendor lock-in.*
- Reverse engineered competing product's API and authorization processes.
- 1Nomo** | *Streaming, Transcoding, OBS, Nginx, Flask, Celery, SQLAlchemy* Jan '19 – May '23  
*Free-to-Air Linear TV Station Platform.*
- 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 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 System** | *RaspberryPi, ffmpeg, Python* Oct '20 – Feb '21  
*Automated Post-STB Monitoring System*
- Improved time to identify service disruptions by automating monitoring live broadcasts.
  - Reduced service disruptions and mitigated equipment damage by automated NOC monitoring.

## 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; 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.