Paul Walko

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EMPLOYMENT

DevOps Engineer Aug. 2019 – Present
Ozmo, Inc *Blacksburg, VA*

- **Observability**: Built monitoring stack with Grafana, OpenTelemetry, ELK, Kafka
- **AWS ECS/Fargate**: Helped migrate from Elasticbeanstalk
- **SOC 2**: Key component of SOC 2 Audit process
- **CI Testing**: Significantly improved PR turnaround time and developer happiness with automated testing
- **OpenVPN Cloud**: Implemented always on split-tunnel VPN to support remote work
- Helped build event-driven search service in AWS: https://ozmo.com/insights/building-a-world-wide-real-time-search-service

Systems Engineer Jan. – July 2019
Solers, Inc *Arlington, VA*

- Worked with Docker Swarm and Ansible
- Deployed central logging solution for clustered environment

Research Assistant - Analyzed Netflow data Sep. 2016 – Dec. 2017
Hume Center at Virginia Tech *Blacksburg, VA*

- Learned about issues with large data sets
- Intercepted data from keyboards, mice, and other BLE devices
- Created Bluetooth pen-testing device with Ubertooth One and worked with devs on IRC

PROJECTS

GitHub: github.com/paulwalko **Gitea**: git.seaturtle.pw/pew

Self-Hosted Services

- **Mastodon**: social.bigcavemaps.com
- **Geoserver/Leaflet/MapProxy**: bigcavemaps.com/lidar/blacksburg. Used to analyze lidar and find potential caves.
- **Cavepedia**: git.seaturtle.pw/pew/cavepedia. Architected pipeline to import old document, perform OCR, analyze readability, and index into a fully offline searchable application for use in the field.
- **Minio, Gitea, Photoview**

Free/Open Software Contributions

- **2013 – Present**: Use and contribute to OpenStreetMap, especially not well known trails. openstreetmap.org/user/pew9000.
- **2019 – Present**: Archive Team: Help archive Internet services and manage massive amounts of data.

Organizations

VPI Cave Club | *vpicave.club*
2020 - Present

Student Grotto of the National Speleological Society (NSS)

- **Survey/Cartography**: Survey and map unexplored cave passage, including data entry and processing to create a finished map.
- **Training**: Teach new members basic caving skills, including vertical competence when climbing or abseiling rope.
- **Events**: Help organize regional caving events with 200+ attendees.

Virginia Tech Linux/Unix Users Group (VTLUUG) | *vtluug.org, github.com/vtluug*
2016 - Present

- **FreeIPA/LDAP**: Maintain accounts for email, shell access, and webserver.
- **Rebuilt Infrastructure**: Updated services to deploy with Ansible and run all services with Docker.
- **Organized funds**: Obtained $1300 for new servers and equipment; oversaw purchasing additional components.

Outdoor Club at Virginia Tech (OCVT) | *ocvt.club, github.com/ocvt*
2017 - Present

- **Dolabra**: Built backend API in Golang and SQLite + front-end in plain HTML/JavaScript. Used Open-ID Connect for auth, Stripe for payments, and Docker for testing and deployment in AWS.
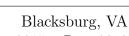- **Appalachian Trail Maintenance**: Regularly clear trail of trees, brush, and clean shelters.

Amateur Radio | Callsign: KN4VDC
2019 - Present

Talks

Austrian Expedition to the Loser Plateau (NSS Convention 2023)
Newberry's Cave Exploration (NSS Convention 2022)

Education

Virginia Tech
Blacksburg, VA

Bachelor of Science in Computer Science; Minor in Cyber Security
Aug. 2015 – Dec. 2018

AWS: API Gateway, CloudFormation, CloudFront, CloudWatch, EC2, ECS/Fargate, ElasticSearch/OpenSearch, Lambda, RDS, Route53, RDS, S3
GIS Tools: QGIS, GDAL, Leaflet, GeoServer, MapProxy
Languages: Bash, C, Java, JavaScript/NodeJS, Python, Ruby
Tools: Docker, Google Workspace, Git, Grafana, Jenkins, Librato, Linux, NewRelic, Ubiquiti