Martin Barker

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Software engineer with 5+ years of experience building full-stack applications, distributed systems, and cloud-native workflows. Creator of open-source music-tech projects like RenderTune, Vinyl2Digital, tagger.site, and Listogs. Experienced with Postgres, Elasticsearch, and HDFS, and in running Ray, Docker, and Kubernetes both locally and in the cloud. Developed petabyte-scale imaging pipelines at the Allen Institute and reliable CI/CD systems at Philips. Skilled Linux user passionate about open access, open source, and community-driven platforms.

SKILLS

- Python
- Linux / Bash
- AWS/GCP/ADS
- React.JS / Node.JS
- Ray Distributed Computing
- GitHub Actions / CI/CD
- Docker / Kubernetes
- SQL (MySQL / PostgreSQL)
- Elasticsearch

PROFESSIONAL EXPERIENCE

Allen Institute   **Seattle, WA**
Software Developer III / Contractor   *November 2024 - present*

- Developed Rhapso, a Python package for stitching petabyte-scale microscopy data using Ray, AWS, and Zarr.
- Designed correctness metrics for large-scale image stitching pipelines, leveraging computer vision and distributed validation exceeding 1petabyte.
- Presented project progress to cross-functional teams, mentoring junior developers and driving collaboration on distributed systems.

Philips Ultrasound   **Bothell, WA**
Senior DevOps / Software Developer   *February 2022 - May 2024*

- Led the migration of 117,000+ work items from IBM RTC to Azure DevOps, released open-source.
- Implemented GitHub Actions for CI/CD pipelines, enhancing deployment automation and reliability.
- Designed HIPAA-compliant tools for logging and testing ultrasound systems, improving reliability and regulatory compliance.

Alaska Airlines   **Seattle, WA**
Software Developer Contractor   *September 2021 - November 2021*

- Developed and maintained web and mobile products, improving user experience and functionality.

Bungee Tech   **Seattle, WA**
Software Engineer   *January 2020 - August 2021*

- Implemented front-end retail analytics graphs and tables, enabling sorting millions of rows of data.
- Optimized Elasticsearch queries supporting large-scale retail analytics workloads.

Zume, Inc   **Seattle, WA**
DevOps Engineer (Software Engineer I)   *September 2019 - January 2020*

- Automated CI/CD build pipelines in Google Cloud Platform with Docker / Terraform / Kubernetes.

MoxiWorks   **Seattle, WA**
Quality Assurance Engineer Intern   *June 2018 - August 2019*

- Strengthened customer experiences by writing full coverage testing suites in Java Groovy.

EDUCATION

Oregon State University   *September 2015 - July, 2019*
Bachelor of Science Degree - Computer Science / Cybersecurity

ADDITIONAL SKILLS

- Familiarity with FFMPEG, experience overseeing product development from start to finish, and automating the digitization and tagging of physical media.