Michael Lubich

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Professional Summary

Results-oriented **Software Engineer** with extensive experience in **test automation, backend development, and CI/CD pipeline optimization** at industry leaders like **Apple** and **Walmart**. Demonstrated expertise in designing **scalable data ingestion pipelines**, streamlining deployment workflows, and building resilient **infrastructure-as-code (IaC)** environments. Proven track record of achieving measurable improvements, including a **50% reduction in deployment times** and backend performance enhancements by **300%**.

Collaborative team leader skilled at guiding **cross-functional teams** across **QA, DevOps, and software engineering**, fostering an environment of growth, inclusivity, and shared success. Committed to building **reliable software solutions** that not only meet technical excellence standards but also drive positive impacts for end-users and communities.

Passionate about **mentorship**, knowledge sharing, and contributing to open-source projects that advance industry best practices. Seeking an opportunity to combine technical expertise and leadership capabilities in a role focused on **innovation, scalability, and meaningful societal contributions**.

Skills

Languages	Python, Java, C, C++, Go, JavaScript, TypeScript, SQL, HTML, CSS, Bash, Shell Scripting
Frameworks	Spring Boot, Express.js, FastAPI, Django, Flask, React, Angular, PyTest, JUnit, GraphQL, PyTorch, Apache Spark, Hadoop, .NET, Microservices Architecture, API Gateway
Libraries	Pandas, NumPy, Scikit-learn, Selenium, BeautifulSoup, Bootstrap, Tailwind CSS, TensorFlow, Matplotlib, OpenCV, Lodash
Tools	Docker, Kubernetes, Git, Jenkins, Ansible, GitHub Actions, Terraform, Helm, MySQL, MongoDB, SQLite, Jupyter, AWS SageMaker, Figma, Xcode, Maven, Protobuf, Postman, Datadog, Appium, VSCode, Prometheus, Splunk, Grafana, ELK Stack
Cloud Platforms	AWS (EC2, S3, Lambda, IAM, RDS, DynamoDB, CloudFormation), GCP (Cloud Functions, BigQuery, Kubernetes Engine, Pub/Sub), Firebase, Kafka, Azure (App Services, Blob Storage)
Operating Systems	Red Hat Linux, Debian, Ubuntu, Windows, macOS
Methodologies	REST, gRPC, DevOps, CI/CD (Continuous Integration/Continuous Deployment), Agile (Scrum, Kanban), TDD (Test-Driven Development), DDD (Domain-Driven Design), Infrastructure as Code (IaC), Continuous Monitoring, Continuous Deployment, Observability, Cost Optimization, Site Reliability Engineering (SRE), Cloud-Native Architecture, High Availability, Operational Excellence, Backend Development, Full-stack Development, Data Engineering, QA Automation
Soft Skills	Leadership, Team Collaboration, Strategic Planning, Conflict Resolution, Problem Solving, Public Speaking, Stakeholder Communication, Technical Documentation, Mentorship, Adaptability, Time Management, Technical Leadership, Cross-Functional Coordination

Education

- **University of California, Berkeley** — August 2019 – August 2023
  Bachelor of Arts in Computer Science — *Berkeley, CA*
  - **Relevant Coursework** Algorithms, Data Structures, Computer Security, Computer Architecture, Database Systems, Artificial Intelligence, Operating Systems, Discrete Mathematics, Probability Theory, Applied Data Science

Experience

- **Polaris Wireless** — September 2024 – Present
  Software Development Engineer in Test & Developer — *San Francisco, CA*
  - **CI/CD Pipeline Automation** Engineered and maintained robust **CI/CD pipelines using Jenkins**, reducing deployment time by **50%** and automating build, test, and deployment workflows across multi-platform environments (**Linux, Windows, MacOS**).
  - **Cross-Functional Team Leadership** Led and mentored a **cross-functional team of 4 engineers**, fostering collaboration across **QA, DevOps, and backend engineering teams** to deliver high-impact projects.
  - **Build Process Modernization** Migrated **Ant-based build systems to Maven**, optimizing **dependency management** and improving build efficiency by **25%**.
  - **Scalable Data Ingestion Pipelines** Designed and deployed scalable **data ingestion pipelines** with **Apache Spark** and **Hadoop**, processing over **10 million records daily** and reducing latency by **40%**.
  - **Automated Testing Frameworks** Developed comprehensive **regression and integration testing frameworks** using **PyTest** and **JUnit**, increasing test coverage by **35%** and reducing bugs by **30%**.
  - **Multi-Platform Compatibility** Implemented deployment strategies ensuring **cross-platform compatibility** across **Red Hat Linux, Windows, and MacOS**, reducing integration issues by **20%**.
  - **DevOps Collaboration** Collaborated with **QA, development, and operations teams**, streamlining deployment workflows and enhancing team productivity by **20%**.
- **Apple** — January 2023 – July 2024
  Software Development Engineer in Test, CoreOS - File Systems — *Cupertino, CA*
  - **Python Automation Development** Migrated and optimized over **20 legacy test scripts in Python**, achieving a **300% improvement in automation efficiency** and reducing manual QA overhead.
  - **High-Priority Issue Resolution** Managed and resolved over **1,100 high-priority tickets**, ensuring stable deployment of **APFS updates** impacting over **100 million macOS users**.
  - **Ansible Process Automation** Implemented streamlined workflows using **Ansible**, reducing manual intervention by **30%** and improving deployment efficiency by **200%**.
  - **Modular Test Suite Design** Designed modular **Python test suites**, enhancing code reusability and reducing redundancy by **40%**.
  - **Cross-Department Collaboration** Facilitated cross-departmental communication with **product, engineering, and QA teams**, improving workflow efficiency by **20%**.
  - **Technical Documentation** Authored detailed **technical documentation** and troubleshooting guides, reducing onboarding time for new hires by **50%**.
- **Walmart** — May 2022 – August 2022
  Software Engineer Intern — *Sunnyvale, CA*
  - **High-Performance REST APIs** Built and optimized **REST APIs** for large-scale data retrieval, managing over **50,000 data items daily** and reducing latency by **60%**.
  - **Backend Performance Optimization** Enhanced backend performance by **300%** using optimization techniques in **Java** and **Spring Boot**.
  - **UX Workflow Design** Designed user flows using **Figma** and implemented them in **Angular**, achieving a **25% increase in user satisfaction**.
  - **AdTech Revenue Growth** Developed scalable advertisement delivery systems, improving efficiency by **45%** and increasing revenue by **$2 million annually**.
  - **Task Automation** Automated recurring tasks, saving over **1,400 work hours annually** and reducing costs by **$4 million**.
- **Lawrence Berkeley National Laboratory** — May 2021 – August 2021
  Software Engineer Intern, Machine Learning — *Berkeley, CA*
  - **Machine Learning Model Optimization** Enhanced model clustering accuracy from **82% to 87%** using **K-Means** and **hierarchical clustering**.
  - **Data Analysis and Insights** Performed extensive **data correlation analysis**, identifying trends and improving hypothesis testing outcomes.
  - **Workflow Automation** Streamlined **data processing workflows**, saving over **200 hours annually** in repetitive tasks.
  - **Visualization Tools Development** Built reusable **data visualization libraries**, improving reporting efficiency across multiple projects.
- **Honda Innovations** — January 2021 – May 2021
  Software Engineer Intern — *Mountain View, CA*
  - **Fleet Optimization** Engineered software solutions to optimize **medical supply delivery logistics**, achieving a remarkable **500% improvement in delivery rates** across multiple operational zones.
  - **Agile Methodologies** Implemented **Agile methodologies** and facilitated daily stand-ups, resulting in a **30% increase in team productivity** and a **25% reduction in project delivery timelines**.
  - **Workflow Automation** Automated continuous integration and deployment workflows using **GitHub Actions**, improving **code integration efficiency by 35%** and ensuring seamless build processes.
  - **Capstone Project Leadership** Led a high-impact **Capstone Project** focused on integrating innovative strategies for operational efficiency, delivering a **$1 million cost-saving** outcome through data-driven decision-making.
  - **Cross-Functional Collaboration** Collaborated with cross-functional teams, including engineers, project managers, and stakeholders, ensuring alignment on strategic goals and improving project visibility.

Projects

- **Equiverse.ml** Developed an AI-driven platform to improve educational equity, enhancing resource accessibility for over **5,000 underrepresented students** through scalable, data-driven solutions.
- **Flyoneo.ml** Co-founded a startup specializing in **AI/ML-driven solutions**; led a team of **8 interns**, successfully launching an MVP with over **1,500 active users**.
- **Verizon - *Unbiased*** Designed technology solutions to reduce hiring discrimination by **25%**, improving diversity and fairness in recruitment pipelines.
- **Open Source Contributions** Contributed to the Django project by identifying and resolving critical bugs and enhancing documentation for improved usability.
- **Pintos Operating System** Refactored and expanded core OS functionality, achieving a **40% performance improvement** through optimized code architecture.
- **Encrypted File Sharing System** Built a secure file-sharing system with **end-to-end encryption**, achieving a **50% increase in data transfer speeds**.
- **Gitlet Version Control System** Implemented a lightweight, efficient Git version control system, reducing commit times by **66%** and enhancing performance.

Journal Publications

1. ***Stream temperature predictions for river basin management in the Pacific Northwest and mid-Atlantic regions using machine learning.*** Michaelle Lubich.
   Published in Water, 2022, Volume 14, Issue 7, Pages 1032, MDPI.
2. ***Classical Machine Learning for Widespread Stream Temperature Predictions: Demonstrations in the Pacific Northwest and Mid Atlantic Regions.*** Michaelle Lubich.
   Published in AGU Fall Meeting Abstracts, 2022, Volume 2022, Pages H12E-04.
3. ***Multiscale Effects of Climate-driven Disturbances on River Water Quality.*** Michaelle Lubich.
   Published in Frontiers in Hydrology 2022, Pages 152-01.
4. ***Investigating the Impacts of Climate-driven Disturbances on River Water Quality using Machine Learning and Statistical Modeling Approaches.*** Michaelle Lubich.
   Published in AGU Fall Meeting Abstracts, 2021, Volume 2021, Pages H22E-01.
5. ***Data-Model Integration and Machine Learning Approaches for Hydrobiogeochemical Modeling Applications.*** Michaelle Lubich.
   Published in AGU Fall Meeting Abstracts, 2021, Volume 2021, Pages B15J-1551.
6. ***Predicting Stream Temperature Across Spatial Scales With Low Complexity ML.*** Michaelle Lubich.
   Published in AGU Fall Meeting Abstracts, 2021, Volume 2021, Pages H35D-1070.

Volunteering

- **Edlyft** Bootcamp Instructor
  - **Diversity Advocacy** Empowered women and underrepresented minorities by teaching core **Computer Science** concepts, contributing to a **15% increase in diversity** within the tech education community.
  - **Technical Mentorship** Mentored over **50 students** in **Data Structures**, **Algorithms**, and **Python Programming**, enhancing problem-solving skills and career readiness.
  - **Outcome-Driven Training** Delivered structured technical workshops, receiving consistent **4.9-star feedback ratings** for clarity, effectiveness, and mentorship quality.
  - **Technical Communication** Facilitated workshops on **Agile Development**, **Version Control with Git**, and **Debugging Best Practices**.
  - **Innovation in Curriculum Design** Designed engaging, hands-on technical labs focusing on **Software Development Lifecycle (SDLC)**, **Backend Development**, and **Frontend Integration**.