

Thadeus Burgess

Austin, TX
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Experienced Senior Software Engineer with a robust background in designing and implementing scalable data storage, processing systems, and distributed RESTful services, particularly in the healthcare domain. Proven expertise in leading the development of HIPAA/HiTech compliant web applications and contributing to award-winning projects. Skilled in full-stack development, big data technologies, and agile project management, with a passion for intelligent systems and innovation.

Skills

- Languages & Frameworks: Python, Scala, FastAPI, Node.js, Flask, SQLAlchemy, React, jQuery
- Databases & Storage: PostgreSQL, MongoDB, Redshift, Redis, RabbitMQ, AWS S3, Parquet
- DevOps & Cloud Services: AWS, GCP, Docker, Jenkins, Terraform, Vault, Ansible, ECS
- Data Processing & Analysis: Apache Spark, Hadoop Ecosystem, XGBoost, scikit-learn, JupyterHub, LLMops (llama3, litellm, openai gpt-4).
- Web Technologies: HTML5/CSS3, Bootstrap, LESS, JSON
- Version Control & Collaboration: Git, Code Review Practices, Leading and mentoring technical teams
- Methodologies: Agile/Scrum, Test-Driven Development, Continuous Integration/Deployment, GitOps
- Patents Received: Establishing a Mesh Network - US 20130279409 A1, Communicating Data in a Mesh Network - US 20130279410 A1

Experience

Staff Software Engineer / Director of Engineering

ClosedLoop.ai (remote)

12/2017 - Present

As a senior technical leader and architect, I led significant enhancements in backend systems, data processing, and cloud infrastructure, substantially elevating scalability and performance. My contributions were instrumental in ClosedLoop.ai's triumph in the CMS.gov AI Health Outcomes Challenge and in securing the Best in KLAS award for multiple consecutive years. My technical proficiency encompassed cloud architecture, API development, big data processing with Apache Spark, infrastructure automation via Terraform, and advanced programming in Python, underpinning the creation of innovative, high-performance platform features.

- **Leadership in Engineering Best Practices:** Cultivated a robust engineering culture by promoting best practices in software development and architecture. Championed agile methodologies, continuous integration/deployment, and rigorous peer-review processes, mentoring team members and leading by example to elevate team performance and project outcomes.
- **Spark Systems Design and Optimization:** Spearheaded the development of high-performance, low-level Spark systems, significantly enhancing data storage and querying efficiency. Engineered advanced solutions integrating custom Spark SQL Catalyst rules and optimizing execution with tailored DAG (Directed Acyclic Graph) strategies to manage expansive datasets and complex queries swiftly.
- **RESTful API Development:** Designed and implemented RESTful APIs using Scala, facilitating efficient data exchange and integration within cloud ecosystems. Enhanced system responsiveness and throughput by developing scalable APIs and integrating them with various cloud services and internal architectures.

- **DevOps and System Architecture:** Played a pivotal role in shaping the system architecture, focusing on DevOps, security, and HIPAA compliance. Led initiatives that encompassed cloud resource management with Terraform, secure authentication with Auth0, and multi-cloud deployments across AWS and GCP platforms. Worked collaboratively with the team to ensure robustness, scalability, and maintainability of underlying infrastructure.
- **Innovation in Data Solutions:** Developed comprehensive solutions for data ingestion, export connectors, and model lifecycle management, including a Python-powered, dockerized model inference pipeline and user-friendly data libraries intended for use via Jupyter Notebooks. Recently, focused on LLM (large language model) operations, aligning with cutting-edge industry standards.

Solo Software Engineer

ATXware, LLC. (remote)

01/2015 - 09/2017

- Led the research and implementation of multiple software solutions for business clients, focusing on rapid application development to create working prototypes that evolved into production-grade applications.
- Developed a web-based compounding pharmacy sales management platform that processed \$98MM in insurance claim transactions over two years.

Lead Software Engineer

Draker Inc. (Formerly Solar Power Technologies Inc.) (Austin, TX)

02/2011 - 01/2015

- Designed and implemented a cloud-based horizontally scaled data collection, storage, rollup, and analytics platform capable of handling billions of data points.
- Developed one of the world's largest scalable mesh networks supporting 3000+ nodes, and intelligent array analysis algorithms to optimize solar array operations.

Software Engineer

Media Research Labs, LLC. (Austin, TX)

08/2009 - 02/2011

- Developed multiple systems enhancing workplace productivity, including participant management and content distribution platforms.
- Implemented software solutions for automated survey data coding, saving significant yearly labor costs.

Education

Associates in Software Engineering

Texas State Technical College

Graduated Honors; President's List: Fall 2008; Dean's List: Spring 2007, Summer 2008

For a more detailed overview of my professional experiences and projects, please visit:
<https://thadeusb.com/resume-full.pdf>