Liam Wood

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EXPERIENCE

Visa *October 2020 – July 2022*

Senior Software Engineer — Clearing & Settlement Infrastructure

- Designed and implemented **state-machine–driven settlement engine components** in Python and C++, processing **trillions in annual transaction volume** across distributed financial infrastructure with strict correctness and consistency guarantees.
- Engineered distributed systems requiring **fault-tolerant, exactly-once processing** under concurrent load; contributed to real-time transaction observability and analysis pipelines across clearing and settlement systems.
- Built comprehensive **unit and integration test suites** for high-criticality financial infrastructure, ensuring correctness and full edge-case coverage for concurrent transaction flows.
- Operated within a strict **Linux-based production environment**; diagnosed and resolved complex distributed system failures under time pressure with direct financial impact.

Microsoft *July 2022 – Present*

Software Engineer II — Platform Infrastructure

- Own design and end-to-end reliability of distributed notification infrastructure processing **6B+ events/month** across OneDrive and SharePoint, spanning dozens of interdependent services on Linux-hosted AKS clusters.
- Designed **multi-region failover** architecture using Azure FrontDoor and Traffic Manager; maintained **99.99% availability** under continuous global load with automated BCDR failover runbooks.
- Architected **KEDA-driven autoscaling** tied to real-time queue depth and traffic patterns, reducing tail latency and eliminating over-provisioning waste ($500k–$750k annual savings).
- Led full **AKS migration and infrastructure re-architecture** — rebuilt infra-as-code pipelines and cluster provisioning for safe, repeatable deployments at scale.
- Built **process state observability** systems and incident dashboards; defined alerting thresholds, runbooks, and on-call escalation paths with SRE teams.
- Promoted twice in 3 years for technical leadership across reliability engineering, cost optimization, and deployment safety.

Digital Worlds Institute — University of Florida *August 2019 – February 2020*

Software Developer

- Built a **Node.js backend** with Redis pub/sub managing **100+ concurrent WebSocket connections** and real-time distributed state synchronization for a browser-based AR platform.

EDUCATION

University of Florida *August 2018 – May 2022*

B.S. Computer Science

SKILLS

Languages	C++, Python, C#/.NET, Node.js, JavaScript
Distributed Systems	Fault-tolerant state machines, exactly-once processing, multi-region failover, high-scale event processing, queue-based scheduling
Infrastructure	Linux (AKS/bare-metal), Kubernetes, KEDA, Azure FrontDoor, Azure DevOps, BCDR Planning
Correctness & Testing	Unit & integration testing, concurrent transaction correctness, edge-case coverage
Observability	Process state monitoring, alerting design, incident response, SRE collaboration