Evan Langlais

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Core Strengths

Systems & Architecture	Distributed Systems/Services, Networking Control/Data Planes, Hardware-Software Integration
Languages & APIs	C++, C#, gRPC, Protobuf, REST, Python, Go, Typescript
Infrastructure & Data	Azure, Service Fabric, Linux, Docker, Pub/Sub, Redis, SQL/NoSQL
Delivery & Operations	CI/CD (Azure DevOps), Production Debugging, Incident Response, Customer Escalations

Professional Profile

Software engineer with 7+ years of professional experience spanning cloud infrastructure, enterprise software, and full-stack product development. Currently a subject matter expert on a next generation software-defined networking hardware platform on Azure Core Networking's VNET team. Known for self-directed problem-solving in ambiguous environments, deep systems-level thinking, and the ability to ramp quickly into unfamiliar domains and technologies to solve customer and technical problems.

Experience

SENIOR SOFTWARE ENGINEER | MICROSOFT | JUNE 2021 - PRESENT

- Founding engineer on Azure's Sirius platform, a new network processing paradigm that moves traffic processing off cloud servers into shared and distributed pools of programmable data processing (DPU) hardware. Products now leveraging this platform include Accelerated Connections, Virtual Networking Routing Appliance, Virtual Network TAP, and more in development.
- Grew from an early IC to established core subject matter expert and a technical lead of the platform, coordinating with external vendors, handling customer escalations and live-site investigations, and providing internal engineering support and cross-team coordination as a force multiplier for others to extend and leverage the platform.
- Led the expansion of a core network interface control plane component to integrate our novel DPU hardware provisioning and resource allocation process across our new global hardware fleet. Extended both the programming and the telemetry path to verify correctness of the system, which now manages tens of thousands of customer allocations monthly.
- Instrumental in the creation of "floating" network interface resources, enabling a highly efficient, low latency, and high throughput use of core networking functions entirely hosted on the DPU without forwarding to a VM. Unblocked critical AI customer workloads that leveraged floating NIC scale-out architecture to remove bandwidth bottleneck for model training.
- Designed and integrated a novel hardware billing pipeline capable of categorizing customer traffic into billable buckets at line rate on our networking DPU. Required radically new approach compared to existing Azure platform due to memory and compute constraints with nearly a 10x scale target above existing platform. Actively capturing millions of dollars of customer traffic daily.
- Rebuilt the customer resource placement algorithm to optimize for hardware utilization efficiency and customer fault tolerance by introducing an extensible multi-dimensional bin-packing selection pipeline. Improved customer availability while defragmenting hardware to increase total regional capacity of "full-bin SKU" sized resources while leveraging the same amount of hardware.
- Own the ACL enforcement behavior of DPU, which required extensive internal and external coordination to document, align, and validate traffic behavior to ensure feature parity with existing Azure platform. Created robust and multi-layered integration and end-to-end tests to validate behavior to prevent regressions for this ubiquitous and foundational security feature.
- Integrated emulated vendor hardware into our CI/CD pipeline to validate DPU control plane and data plane behavior. Our robust testing system continuously verifies firmware behavior as our first layer of automated testing infrastructure to quickly catch regressions and validate new features before it ever enters any real hardware environment.
- Built robust observability dashboards and alerts to monitor end-to-end system reliability KPIs, control plane and data plane health, customer risk concentration, and regression testing outcomes. Enabled data driven review of platform readiness for initial launch to Public Preview and General Availability, and continue to ensure success of platform with increased customer adoption.

SOFTWARE ENGINEER III | FACTSET RESEARCH SYSTEMS | JULY 2019 - JUNE 2021

- Member of Productivity Suite team responsible for maintaining and extending FactSet's Office product extensions, leveraged by buy-side and sell-side investment bankers to improve productivity within Excel, PowerPoint and Word workflows.
- Migrated high-priority features from a legacy VB.NET codebase to a new C# implementation to deliver a unified User Interface across all FactSet products and improve platform maintainability with modern coding practices and parameterized test suite.
- Worked directly with PMs throughout the feature lifecycle – translating customer-reported issued into requirements, prototyping and providing potential UI and behavior approaches, and implementing and delivering to customers.

FREELANCE FULL-STACK SOFTWARE ENGINEER | BUILDMYBOD.COM | FEBRUARY 2016 - JULY 2019

- One of a half dozen full-stack engineers working on a healthcare marketplace platform based out of San Francisco. Collaborated directly with CEO on product vision, viability, design, and implementation of critical features.
- Created the Pricing Assistant feature – allowed both practices and customers to analyze pricing landscape for procedures. Normalized years of inconsistent data into a unified taxonomy, designed aggregation API, and built the presentation layer.
- Added "Subscription Box" product support to enable practices to sell subscriptions of consumable goods at a discount to funnel one-time customer purchases into recurring ones. Integrated into PayPal for seamless recurring billing and payout support.
- Designed "Email Verification" system to reduce low quality signups and lack-luster lead generation by ensuring that accounts receiving pricing estimates have valid practitioner follow up path.

Publications

DISAGGREGATING STATEFUL NETWORK FUNCTIONS | NSDI 2023

- Co-authored paper presenting Sirius, a system for disaggregating stateful network functions (firewalls, NAT, load balancing) into shared pools of P4-programmable NIC appliances, achieving 5-10x improvement in connections-per-second for Azure VMs. Now in production as Azure Accelerated Connections.

OFFLOADING CLOUD NETWORK SERVICES AT PRODUCTION SCALE WITH SONIC DASH SMARTSWITCH | NSDI 2026

- *NSDI '26 Community Award winning paper*
- Co-authored paper presenting learnings from operating Sirius DPU pools with appliance architecture since 2023 and proposing a next generation of DPU pool architecture coupled into T1 routers with robust open-source community support and DASH programming model.

Education

UNIVERSITY OF CONNECTICUT | BACHELOR OF SCIENCE IN ENGINEERING | 2019

Computer Science and Engineering – Magna Cum Laude (GPA: 3.85)