Murali Krishtna

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Experience

Software Development Engineer "Intern"   *Apr 2025 – Aug 2025*
Pavepal.ai ↗

- Transformed a *barebones HTML+JS proof-of-concept* into a **production-grade full-stack application** used by live clients.
- Established a structured development workflow across dev/beta/prod/etc environments with *full CI/CD pipelines*. Evaluated and selected the entire tech stack (MongoDB, Next.js, CDN, OAuth providers, etc.) based on current and future requirements.
- Built the backend end-to-end via AWS CDK including *OAuth, S3, API Gateway, MongoDB (setup+scripts)*, and 4 APIs to deliver road quality and defect data based on client requirements.
- Built the frontend with CDN integration, *custom JWT authentication/refresh logic with Cognito*, and 2 additional business UX features to render defects on maps.

Software Development Engineer II   *2022 – 2024*
Amazon

- Built the "Collection" Tab ↗ on Amazon's Product Page, developing the frontend, backend and event-driven data systems, driving a **10% uplift in pickup orders (~10K/day)**
- Proposed and led a solution with DHL to validate DHL customer-ids on Amazon.de, preventing incorrect entries and **eliminating ~5K failed deliveries monthly** in Germany
- Designed a *low-latency (~20 ms)*, *high-traffic (4K+ requests per second) API* to display the availability of nearby Pickup Locations in Checkout, invoked every time an eligible customer enters checkout.
- Mentored junior engineers and interns on tasks and career development. Conducted ~**10+ interviews** and assessed various system design decisions.

Software Development Engineer I   *2020 – 2022*
Amazon

- Designed and implemented a highly performant, core API to retrieve (driving-distance or ML-based) Pickup Locations, handling **200+ calls per second** with a **sub-150ms** latency constraint.
- Centralized partner-specific configurations used across multiple teams into a single data store, by creating a common access library and a microservice for gated operations, **reducing** manual dev effort by ~**4 days per partner**.
- Identified a critical delivery date gap blocking Prime's launch on Amazon.pl and **led** the solution development across 5 central teams and Amazon.pl leadership to deliver the fix, *enabling the Poland Prime launch.*
- **Managed service readiness** to **handle higher loads** on Black Friday and Prime Day events. Enabled dynamic distributed throttling across services to eliminate bot-related service overloads.

Skills

Programming : Java, TypeScript, Python, SQL

Software Engineering : Clean Code, Design Patterns, SOLID, System Design, Test-Driven Development, Alarm-Monitoring Stacks, etc.

Cloud / Frameworks : PyTorch**,** Spring, Django, Next JS, React JS, AWS CDK, EC2, S3, DynamoDB, SQS, OAuth, MongoDB

Education

Simon Fraser University University   *2024 - 2025 (expected)*
M.Sc in Computer Science, Visual Computing
Amrita University   *2016 - 2020*
B.Tech in Computer Science