

MD. NAZMUL HASAN SHEUM

Senior Backend Engineer

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Professional Summary

Senior Backend Engineer with 7+ years of experience designing scalable, secure, and resilient backend systems using PHP (Laravel, CodeIgniter) and cloud-native infrastructure. Strong foundation in Clean Architecture, SOLID principles, and distributed system reliability patterns including idempotency, retry strategies with exponential backoff, circuit breaker implementation, and rate limiting.

Proven experience leading backend modules, refactoring legacy systems, enforcing code quality standards, and delivering enterprise-grade solutions serving 1,000+ users. Passionate about system design, performance optimization, and mentoring engineers toward high-quality engineering practices.

CORE TECHNICAL EXPERTISE

Backend Engineering

- PHP 8.x (Laravel, CodeIgniter) – scalable, modular, maintainable systems
- RESTful API design & versioning, Clean Architecture, SOLID principles
- Design patterns: Repository, Service Layer, Factory, Strategy

Distributed Systems & Reliability

- Idempotent API design, retry strategies with exponential backoff, circuit breaker pattern
- Rate limiting, request throttling, asynchronous job queues, batch processing
- Fault-tolerant third-party integrations, high-concurrency system design

Performance Engineering & Optimization

- Full-stack profiling (Xdebug, Laravel Debugbar, Telescope)
- SQL query optimization, EXPLAIN plan analysis, N+1 detection
- Load testing & benchmarking (ApacheBench, JMeter), performance regression checks
- Memory & CPU profiling, bottleneck diagnosis
- Defined performance budgets & SLAs for high-concurrency applications
- Cache optimization (Redis, query/result caching)

Testing, Security & Quality

- PHPUnit (unit & feature), TDD adoption, CI/CD performance checks
- SonarQube static analysis, OWASP Top 10 mitigation, input validation & API security best practices

Cloud & DevOps

- AWS (EC2, S3, RDS, Auto Scaling, CodePipeline), GCP
- Docker, containerized deployment pipelines, Linux environments

Supporting Technologies

- Frontend: Blade, Jinja templates, JavaScript (ES6+), VueJS, AngularJS, Bootstrap 5, Tailwind CSS
- Python: Flask REST APIs

Professional Experience

Senior Software Engineer

[Brain Station 23 PLC](#) (On-site at [GrameenPhone](#)) | August 2023 – Present

- Architected backend modules for enterprise asset management system
- Designed scalable RESTful APIs following Clean Architecture principles
- Applied Repository & Service Layer patterns for modularity
- Introduced unit & feature testing practices to improve release reliability
- Improved application performance by 30% through query optimization and caching
- Resolved SonarQube security findings and mitigated OWASP Top 10 vulnerabilities
- Refactored legacy modules to improve maintainability and enforce SOLID principles
- Conducted code reviews and mentored developers on clean architecture and best practices

Software Engineer

[Oneixchange LTD](#), Singapore (Remote) | July 2020 – July 2023

- Led backend development for business-critical web applications
- Architected RESTful services for web and mobile platforms
- Implemented CI/CD workflows and collaborated with DevOps on AWS and GCP infrastructure
- Supervised a 5-member engineering team, providing code review, architecture guidance, and performance optimization mentorship

Junior Programmer

Freelance IT Lab | September 2017 – April 2019

- Developed backend features using PHP (CodeIgniter) for multiple client projects, including e-commerce platforms
- Contributed to performance improvements, bug fixes, and delivery of production-ready applications

Key Projects

Fixed Asset Management (Enterprise Internal System – Telecom Sector)

Team: 11 | Role: Senior Backend Engineer

- Designed asset lifecycle modules with complex relational data modeling
- Structured and optimized database schema and indexing strategy
- Refactored performance bottlenecks improving query efficiency
- Integrated third-party enterprise APIs with resilient handling and fault-tolerant handling mechanisms
- Enforced SonarQube compliance and security remediation

Relief Teacher System ([Dunearn Secondary School, Singapore](#))

Team: 8 | Role: Lead Backend Engineer

- Architected API-first backend supporting web (AngularJS) & mobile platforms
- Implemented rule-based allocation logic, modular HMVC architecture for maintainability
- Optimized database queries and caching for consistent performance under high usage

STEM Calendar ([MOE Singapore](#))

Team: 5 | Role: Lead Backend Engineer

- Designed backend services supporting public event listings and registrations
- Managed AWS-based deployment and database optimization

Education

B.Sc. in Computer Science and Engineering

Jashore University of Science and Technology (JUST) (2012–2017)

Professional Achievements

- Reduced API latency by 40% and improved throughput by implementing profiling and query optimization best practices
- Successfully delivered enterprise-grade systems used by 1,000+ internal users
- First Place, Intra-university Programming Contest (2013); Python Gold Badge on [HackerRank](#); SQL (Intermediate) Certification on [HackerRank](#)