Mohamed Bnshi

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Profile

Fresh graduate software engineer with three industry collaborations at Ericsson and Trafikverket. Built security automation pipelines, AI-driven auto-healing system, and DevOps tooling. Looking for a junior role in backend development, DevOps, or IT consulting.

Skills Overview

- Full-stack development (React, Node.js, Python, Flask, PHP)
- DevOps & CI/CD (Docker, Kubernetes, GitHub Actions, Azure DevOps, Ansible)
- AI-driven systems and automation (LLM, AI agents, MCP)
- Secure software development & DevSecOps (OWASP, vulnerability analysis, threat modeling)

Education

Blekinge Institute of Technology (BTH) | Karlskrona
Bachelor's in Software Engineering (Web Programming, 180 ECTS)

- Major: Software Engineering
- Focus: Full-stack development, System Architecture, and Database Engineering

Technical Skills

Languages: JavaScript, TypeScript, Python, PHP, SQL, Bash

Frameworks & Libraries: React, Node.js, Express.js, Flask, Symfony 7, Astro, Tailwind CSS, Web Components

Databases: MySQL, PostgreSQL, SQLite, MongoDB

APIs: RESTful APIs, GraphQL

ORM/ODM: Doctrine (PHP), Mongoose (MongoDB)

DevOps & Tools: Docker, Kubernetes, Azure DevOps, GitHub Actions, Jenkins, Gerrit, Ansible, Git, Linux/Unix

Security: DevSecOps pipelines, vulnerability scanning (Trivy, Grype, Semgrep, ZAP, Gitleaks), EPSS/KEV-based triage, threat modeling

Compliance: GDPR-aware development and handling of sensitive data

Experience

Ericsson-BTH | Software Engineer (Student Position) – AI-driven Systems | On-site Karlskrona *Jan – June 2026*

Team of 11 engineers | Agile workflow | Personal contributions:

- Implemented the traffic light risk classifier (5 gates: diff size, file type, blast radius, AI effort, pipeline health) that blocks risky pushes when confidence is low
- Integrated the Knowledge Graph for service dependency mapping and blast-radius assessment across 58 microservices
- Built database layer and DAO repositories for pipeline event logging and job tracking
- Containerized agent services and test environments with Docker and Kubernetes for reproducibility

Technologies: MCP, LLM integration, AI agents, Event-Driven Architecture, Docker, Kubernetes, CI/CD, Gerrit, Jenkins

Thesis (Individual) | BTH in collaboration with Ericsson | On-site Karlskrona *Jan – Jun 2026*
Context-Aware Security Findings Aggregation and Triage Pipeline for DevSecOps CI/CD

- Built an automated pipeline that discovers components from IaC (Helm, Ansible, Compose), extracts security context from source code and deployment configs, runs 5 scanner categories, and outputs a per-component triaged view
- Reduced vulnerability finding volume by 36–57% through cross-scanner deduplication across Trivy and Grype
- Designed SSVC-inspired triage (T1–T4) using KEV, EPSS, fix availability, and network exposure - validated across 8 real systems deployed with three different IaC paradigms
- Integrated threat model data at component level; manually assessed 660 threats across all systems

- Pipeline runs end-to-end in under 8 minutes, validated as a Jenkins declarative pipeline
- Implemented 45 Semgrep rules for automated code-behaviour predicate extraction; achieved 100% precision/recall against manually verified ground truth across 5 systems

Technologies: Python, Bash, Jenkins, Docker, Trivy, Grype, Semgrep, OWASP ZAP, Gitleaks, Helm, Ansible, Docker Compose

Trafikverket – Student Developer, DevOps *Jan – Jun 2025*
Academic collaboration (classified) | Team of 7 students

- DevOps Engineer contributing to requirements analysis, planning, and implementation of automated security tooling in CI/CD pipelines
- Implemented an automated "Vulnerability Checker" in the team's CI/CD pipeline to strengthen supply chain security
- Conducted vulnerability analyses focusing on CVE, CVSS, and SBOM management
- Lead presenter at final client presentation – demonstrated both the technical solution and its business value

Technologies: CI/CD, vulnerability scanning, SBOM, pipeline automation, cross-platform implementation

Projects (Selected)

Microservices E-Scooter Rental System *BTH, 2025*

- Full-stack development of a real-time system based on microservices architecture
- Docker for container management, CI testing via Scrutinizer
- Contributed to planning the entire tech stack

Technologies: MongoDB Atlas, Mongoose, GraphQL, React, SCSS, Scrutinizer, Jest, Docker, Git, Linux

MoveOut – Moving System *BTH, 2024*

- Monolithic MVC web application developed using Scrum methodology with MySQL and pure SQL
- Individually responsible for planning and full-stack implementation

Technologies: MySQL, Node.js, Express.js, REST API, EJS

DevOps Project – CI/CD and Cloud Deployment *BTH, 2025–2026*

- Built CI/CD pipelines with GitHub Actions for automated building, testing, and deployment of containerized applications
- Containerized services with Docker, orchestrated multi-container deployments on Kubernetes, and provisioned cloud infrastructure on Azure
- Automated server configuration and application deployment across environments using Ansible playbooks

Technologies: Docker, Kubernetes, GitHub Actions, Azure, Ansible, Git, Linux

Other web projects: Symfony 7 MVC application (Doctrine ORM, PHP) • SPA with Web Components & GraphQL (vanilla JS)

Languages

Swedish – Fluent | English – Fluent | Arabic – Native

References

Available upon request (four references at Ericsson covering both projects).