Nayonika Sen

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EDUCATION

Northeastern University, Boston, US **Sep 2024 - May 2026**
Master of Science in Computer Science
Courses: Programming Design Paradigm, Building Scalable Distributed Systems, Advanced Algorithms, Web Development
Visvesvaraya Technological University, Belagavi, India **Jul 2016 - Sep 2020**
B.Eng. in Computer Science and Engineering, **GPA: 8.70/10.0**
Courses**:** Data Structures and Algorithms, Object-Oriented Programming, Networks, DBMS, Cloud Computing, Machine Learning, NLP

SKILLS

Programming Languages: C, Python, Java, Bash, Shell, HTML, CSS, JavaScript, PHP, ReactJS, NodeJS, XML, JSON
Infrastructure: Git, Bitbucket, Linux, Windows, MS Office, Confluence, JIRA, ServiceNow, Vim, Terraform
Databases: Postgres, MySQL, MSSQL, SQL*Plus, Redis
Development: Azure, Docker, Kubernetes, Jenkins CI/CD, AWS, GCP, Grafana, Splunk, SoapUI, Apache Hadoop, Scrum, Junit, Agile, Kafka

EXPERIENCE

Northeastern University - Khoury College of Computer Sciences, Boston, US **Sep 2024 - Dec 2024**
Graduate Teaching Assistant
- Conduct code inspection for students in **Software Development** coursework with Dr. Matthias Felleisen and Dr. Benjamin Lerner.

Visa Inc., Bangalore, India **Mar 2022 - Jul 2024**
Software Engineer- SRE
- Delivered **33%** load distribution for seamless upgrades at full traffic capacity by developing a multi-data center AWS solution with VPC isolation and Amazon Route 53 load balancing.
- Secured online transactions with a **25%** improvement by integrating FIDO, WebAuth, and CTAP for authentication across data centers.
- Independently achieved **81%** reduction in infrastructure costs by migrating transactional data using Apache Hadoop and Hive, transitioning from an enterprise to an open-source solution.
- Increased system scalability by **40%** for Visa Token Service through Kubernetes containerized deployments, monitoring pod status and logs, and implementing horizontal pod autoscaling for optimized resource allocation.
- Developed shell scripts to automate SSL certificate checks, network connectivity and RESTful APIs validation, reducing manual errors.
- Ensured **100%** availability for Visa Secure by analyzing packet captures with Wireshark and TCP dump, troubleshooting SSL/TLS handshake errors and RTT latency issues through SYN, SYN-ACK, and ACK analysis.
- Remediated **95%** of security vulnerabilities identified through Qualys scans through targeted patches and system upgrades.
- Reduced resolution time for critical issues by creating Grafana dashboards for real-time event monitoring, focused on flow connections.

Temenos, Bangalore, India **Oct 2020 - Mar 2022**
Software Engineer
- Took ownership of **20+** platforms, driving improvements with Jenkins automation, Azure Container Registries for image promotion, and Azure CLI for Kubernetes deployment.
- Enhanced security by **38%** through Jenkins Master server upgrades and Azure AD integration for SSO, MFA, and role-based access controls, addressing edge cases for robust protection.
- Configured ClamAV antivirus tool on compromised Linux- servers for creating a scan report to help detect any type of malicious software.

State Bank of India, Guwahati, India **Jul 2019 - Aug 2019**
Summer Intern
- Implemented Network Access Control solutions leveraging Aruba ClearPass OnGuard for advanced endpoint visibility and compliance enforcement to mitigate unauthorized access incidents.
- Optimized network efficiency by implementing load balancing techniques with Nginx and HAProxy, **i**mproving server response time.

PROJECTS

Kanbas – Your Learning Management System **Sep 2024 - Dec 2024**
- Developed a user-friendly platform using ReactJS and TypeScript to enhance the educational experience for both instructors and students. Reduced manual administrative workload by **40%** by enabling instructors to manage courses and track student progress with ease.

Railway Ticket Verification using Face Recognition **Jul 2020**
- Constructed a railway ticket verification system using JavaScript for the client-side interface and Python with scikit-learn for server-side logic, achieving **83%** accuracy in ticket validation. Leveraged OpenCV for image processing, K-Nearest Neighbors (KNN) for classification, and Haar Cascade Classifier for object detection.

ACTIVITIES

- Received **Regional Recognition - Team Award** (Temenos, Q3 2021) and **Execute with Excellence Award** (Visa Inc., April 2024).