



# SUBHASHIS NATH

## Lead Developer

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### PROFILE

A Customer Focused, Result-oriented IT professional having B.Tech degree in Computer Science and working as a **Senior Java Fullstack Developer (Spring Boot, React JS, Azure Devops, Node JS with Typescript)** having **8+ years of relevant IT experience** in **Web Development, Unit & Integration Testing, Deployment & CI/CD Integration** in diversified domains (viz **IOT, Real Estate, Cash Payments, Virtualization & Embedded**) during exposure to multiple phases of Software Engineering.

### WORK EXPERIENCE

#### Mindtree Ltd.

Technical Lead (June 2021–July 2023)

#### Capgemini India Pvt Ltd.

Senior Consultant (June 2018–June 2021)

#### Harman International Pvt Ltd.

Technical Lead (July 2017–May 2018)

#### Alumnus Software Ltd.

Senior Engineer (June 2011–June 2017)

### PROFILE SUMMARY

- Got opportunities to work from Customer Locations with Global Clients in various domains for bringing multiple Businesses for their Business Partners. Have managed to Deliver well in Development based activities mainly.
- Good at understanding Business Requirements from Stake Holders, Analyze and Translate them to System and Implementation specific User Stories, Effort Estimation, Taking Complete Ownership of the changes, Risk Identification in the first place by proactive Collaboration within or outside Team, Unit Testing religiously, active participation in Scrum Ceremonies & Product Demos to Stake Holders.
- Integrating Automated Build, Tests, Code Coverage, Security Scanning and Docker/PCF Deployment as part of CI/CD pipeline. Sharing these reports with Stake Holders regularly. Provide Maintenance support including RCAs to complex business issues in Production Environment sometimes.

### SKILLSET

Java 17, React JS, Express JS with Typescript, Azure Webapp, Azure Function App, Azure CosmosDB, Spring Boot 2.7, React Functional Components, React Router, React Hooks, Redis, Spring Security, PostgreSQL, SQL, RabbitMQ, Elastic Search, MongoDB, Docker, CI/CD pipeline, Spring JDBC, Spring JPA, Junit, Mockito, PowerMock, Gradle, GitLab, Jenkins, Git, Pivotal Cloud Foundry, Jacoco, Fortify scan, ES6 Js, Async Js.

### OTHER ACCOMPLISHMENTS

#### Training and Certifications

Certification on React – The Complete Guide 2023 (incl. React Router) by Maximilian Schwarzmuller on Udemy

#### Compliments

Received appreciation email from client stakeholder for not only showing exceptional ownership and commitment but also for going extra miles when team required.

#### Problem Solving Skill

Leveraged success in RCA of a major Java Spring Boot Azure App service in Production environment which was underperforming and thus devalued the quality of client offering and client brand image.

It was challenging to upgrade the tech stack as it introduced breaking SDK interfaces which required refactoring entire backend service but ultimately resolved this critical blocker.

Took the key role in RCA, tech upgrade and application refactoring.

It was an intermittent issue and performance test result confirmed it was not dependent on load.

After analyzing TCPdump capture of network traffic discovered that CosmosDB connection was automatically getting disconnected and reconnected in different times

thus increasing http response latency then.

There is no Stackoverflow thread or ChatGPT suggestion available which directly addresses this issue. Had to connect with MS Azure Support team in number of calls if they could shed some light and suggest some workaround.

Ultimately, I was able to fix this issue by upgrading Azure SDK client version to 4, Spring Boot version to 2.7 and Java version from 8 to 17.

## PROJECTS UNDERTAKEN

<b>Title</b>	Netigate In-app Survey Platform Integration
<b>Period</b>	May'23 – July'23
<b>Role</b>	Fullstack Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"><li>● Create Component Level Design of the interaction between all the modules and data flow within and across the system.</li><li>● Create a service and related route and apis in ExpressJS and Typescript which could invoke Netigate Rest Apis and can crud data in Azure CosmosDB.</li><li>● Implemented an api to check if an active survey is available at user home location at user login time and return a user specific survey url in Netigate platform. If user clicks on this link and user is not already part of Netigate sendout list for that particular survey, then add user to that list at runtime. A set of Netigate api invocation happens in the background creating recipient id for that user for that on-going survey without any manual intervention.</li><li>● Create a dialog in ReactJS to prompt user once they login for an in-app survey if available. User could take the survey by clicking on "Take me to the survey" button which would open external Netigate survey page in a new tab in the browser.</li></ul>
<b>Title</b>	Real Estate Fault Reporting Platform
<b>Period</b>	June'22 – April'23
<b>Role</b>	Fullstack Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"><li>● Develop a web application to facilitate Fault/Issue Reporting experience by Employees in the Customer system. Contribute to both Backend and Front end development.</li><li>● Write few screens using React Js Functional Components, Hooks &amp; Router using vanilla js. Used customer's Design system to style all the components.</li><li>● One custom Accordion component was written using React as such component is not available in the existing Design system. Needed to extract styles from the existing design system to create similar look &amp; feel to the custom component.</li><li>● Implemented Fault Reporting backend using Node Js, Express Js, Typescript. Database is Postgres.</li><li>● Write SQL queries to query this database having multiple tables containing relational fault report data using foreign key references.</li><li>● Implemented Azure Webjob to above Database every 5 minutes to fetch newly reported fault &amp;, process them. Based on the Fault Reported location and type of fault reported a workorder request is dispatched to one of the Azure Functions. Each such Function is responsible to integrate with 3<sup>rd</sup> party vendor Rest apis used to actually create a new workorder in the corresponding vendor. In response workorder id or error is returned to the Azure function app and then to Webjob. Webjob sends this status to the Fault Reporter via Email notification.</li><li>● Azure Webapp is written in Node Js using Typescript. Data is stored in Postgres DB. Emailer is written using nodemailer &amp; handlebars npm.</li></ul>
<b>Title</b>	Workplace Seat Booking Application Upgradation
<b>Period</b>	Dec'22 – Jan'23
<b>Role</b>	Java Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"><li>● Upgrade Deskbooking backend Java Spring boot application. It was suffering from cosmos db connection shutdown intermittently and java memory leak issue in Azure Production deployment.</li><li>● Migrate Java 8 to Java 17, Spring Boot to v3, Azure Cosmos DB Java SDK to v4.</li><li>● Used Java SDK new feature such as Record, Sealed classes etc. Renamed Java EE namespace from javax to jakarta. Replaced mvn build agent by gradle.</li><li>● Introduced Redis caching to data retrieval CRUD apis. Get api data is cached on cache miss of the keys using Spring Data Redis. Data save and update through api triggers Azure Functions to evict related key values from the Redis. Cache eviction logic is taken care by Azure Function which is external to Spring Boot Azure webapp to decouple cache eviction from the app itself to maintain cache data integrity. Used Redis datatypes to store data instead of java collections.</li></ul>

<b>Title</b>	Smart Office Management Real Estate Platform
<b>Period</b>	Jan'22 – June'22
<b>Role</b>	Fullstack Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Develop a web application which facilitates client's employees and business partners.</li> <li>• Write Backend app using Express Js Typescript and deployed to Azure webapp.</li> <li>• Automate Employee Desk Booking experience. On successful booking an Azure Function having cosmos db input trigger sends email notification with Desk booking details to the user. Code is written using Java, Spring Boot, Cosmos db, Azure Functions.</li> <li>• Introduced Redis caching to data retrieval CRUD apis. Used Azure Function for cache eviction. Used Redis datatypes to store data instead of typescript data types.</li> </ul>
<b>Title</b>	Smart Inventory Management using Autonomous Drones
<b>Period</b>	June'21- Dec'21
<b>Role</b>	Fullstack Developer, Lead Backend Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Develop Indoor Inventory Management portal for autonomous drones.</li> <li>• Write Rest apis using Java 17, Spring boot, React JS, Mqtt, Docker.</li> <li>• Worked as a Fullstack developer, write few of the screens using React Js.</li> <li>• Participated in different phases of the delivery(development, unit test, ci cd pipeline creation, defect fixes) to release this application on agreed time without compromising quality.</li> </ul>
<b>Title</b>	RTGS Payment Platform
<b>Period</b>	July'20 – May'21
<b>Role</b>	Lead Automation Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Develop a Simulator for couple of Business-critical Core-Banking Microservices viz EBBS and Tsaas in RTGS Payment Flow. The simulator mocks expected response payload &amp; response status from these external Core Banking B2B Endpoints. Thus making regular Automated Sprint Tests &amp; Regression Tests independent of the Core Banking system.</li> <li>• Significant contribution developing Automation Test Framework using Spring Boot, JDBC, ELK, Cucumber</li> </ul>
<b>Title</b>	Next Generation Security with SSO
<b>Period</b>	February'20 – June'20
<b>Role</b>	Lead Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Implement an all-in-one SSO solution using Spring Cloud Gateway and Spring Security SSO securing access to a number of sensitive Business Apis and Web Portals using PCF PingFederate SSO Service plan as Identity Provider (IdP). The project is going to be a high impact solution eventually modifying the existing security model of almost all projects under ESRS.</li> <li>• Implement an Authentication Filter to support both BASIC, SecureID mode of SSO authentication, differentiated by AuthMode header, and integrate the filter with above Gateway.</li> </ul>
<b>Title</b>	360-Degree Services for Smart Devices
<b>Period</b>	June'19 – February'20
<b>Role</b>	Lead Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Write PCF Spring Boot Scheduler service which monitors some table every minute, send notification once there is an update in table entries. The notification message contains Device details such as serial number, product type and api status as payload and is routed to message queue.</li> <li>• Write APIs to retrieve Device, Gateway and Cluster details respectively from multiple databases like MongoDB api, Oracle and PostgreSQL and send response in a specific template that client api understands.</li> <li>• Write corresponding API Gateway Controllers to authenticate inbound requests using Spring Boot and Http basic authentication and deploy to PCF</li> <li>• Write SQL and DB insert, update, delete triggers.</li> </ul>
<b>Title</b>	Remote Service Authentication
<b>Period</b>	May'18 – May'19
<b>Role</b>	Lead Developer
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Write Micro service endpoints and corresponding API Gateway Controllers to authenticate inbound requests using Spring, Jersey and Http basic authentication and Api Key concept. Deploy the Services in PCF. Development and Maintenance for Remote Access to different Dell IOT Storage Products using complex cryptography techniques viz Bouncy Castle and OpenSSL to generate X.509 Certificates and ensure secure Https communication between EMC Storage Device and customer Gateway.</li> </ul>

- Fix SP unauthorized access issue by syncing time between remote Shibboleth IDP at backend and SP at customer Gateway. Write and schedule DB archive cron job.
- Write Python scripts for Device specific activities and automated tests.

**Title**  
**Period**  
**Role**  
**Responsibilities**

Cloud Foundation Automation  
July'17 – May'18  
Senior Developer  
Develop automated imaging and bring up framework for VMware Cloud Foundation (VCF) Racks consisting of ESX, servers, switches, and vSAN, vCPU, NSX using Java, Spring, Selenium.

**Title**  
**Period**  
**Role**  
**Responsibilities**

Concept Search  
Dec'15 – June'17  
Senior Developer  
Write Parser using Apache OpenNLP 1.5 library which can Parse Word Doc/Docx Files based on predefined model templates. Used Artificial intelligence to provide user the facility to search text phrases (concepts) within the document and provided meaningful textual values.

**Title**  
**Period**  
**Role**  
**Responsibilities**

Internet Content Delivery Acceleration Service  
Apr'14 - Nov '15  
Java Developer  
Used Amazon S3 to store media files. Managed Selenium web-driver Java coding to automate measurement of web page load times. Write NSIS scripts to build exe installer of the application.

**Title**  
**Period**  
**Responsibilities**

QA Automation Framework Development  
June'11 – Mar'14  
Develop Automated Test Framework and Automated Functional & Performance Test Cases of CPE for Protocols viz TCP, UDP, IPv4, IPv6, LAN, WLAN, DHCP, IPSec, L2TP, IPoGRE, EoGRE, SMB protocol.