

Jasim Umar

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ABOUT ME

Healthcare-focused software engineer experienced in building web, mobile, AI, and cloud-native products. Skilled in EHR/EMR integrations - especially eClinicalWorks and CareCloud -clinical documentation, appointment and patient workflows, and Revenue Cycle Management. Builds full-stack systems with Next.js, React, Node.js, TypeScript, MongoDB/PostgreSQL, and AWS, with hands-on experience in FHIR APIs, OAuth/JWT, RBAC, PHI-aware AI workflows, claims scoring, denial analytics, and secure cloud deployment.

WORK EXPERIENCE

GenMeditech – Islamabad, Pakistan

Website: https://genmeditech.com/

Software Engineer

[31/10/2025 – Current]

• Develop healthcare products across clinical documentation, EHR/EMR integration, medical billing, claims, denials, and revenue-
cycle workflows.
• Contribute to SmartNotes AI, an AI-assisted clinical documentation platform that converts encounters into structured notes, patient
summaries, and billing information.
• Develop and support integrations with eClinicalWorks, CareCloud, Epic, and Oracle Cerner, including patient, appointment,
encounter, authentication, and clinical-document workflows; most extensive hands-on work is with eClinicalWorks and CareCloud.
• Designed and developed an AR & Denials Revenue Intelligence Platform that normalizes EMR claim extracts, scores recovery
potential, recommends next actions, and creates prioritized worklists for billing teams.
• Implemented A/R aging, denial root-cause, payer/provider/CPT analytics, claim allocation, outcome and ROI tracking, and PHI-
aware LLM analytics with OpenAI and Anthropic.
• Built cloud-native services using AWS CDK, ECS Fargate, ALB, S3, SQS/DLQ, Lambda, Secrets Manager, CloudWatch, ECR,
Cognito, and Amplify, with OAuth 2.0, JWT, RBAC, and audit logging.

Adapture – Atlanta, Georgia, United States

Website: https://adapture.com/

Junior Full Stack Developer

[30/09/2024 – 31/10/2025]

• Maintained and enhanced websites for major brands including IKEA and Harley-Davidson, delivering new features, fixes, and
usability improvements.
• Worked across frontend and backend tasks, troubleshooting production issues and supporting reliable, timely releases.
• Collaborated with distributed teams to test changes, improve performance, and maintain a consistent user experience across platforms.

Intelligent solutions PK – Islamabad, Pakistan

Website: https://modernint.sa/

Intern Software Developer

[01/07/2024 – 30/09/2024]

• Built web applications with Next.js and Node.js, using server-side rendering to improve speed, SEO, and delivery of dynamic pages.
• Supported API integration, debugging, and implementation of maintainable application features.

Shared Mobility – Ohio, United States

Website: https://www.sharemobility.com/

Software Engineer Intern

[30/06/2023 – 31/08/2023]

• Built and improved responsive web and cross-platform mobile interfaces with React.js and React Native.
• Contributed to production features in a collaborative environment, with a focus on usability, responsiveness, and reliable UI behavior.

EDUCATION AND TRAINING

Bachelor of Software Engineering

Bahria University Islamabad [05/2020 – 01/07/2024]

City: Islamabad | **Country:** Pakistan | **Website:** https://bahria.edu.pk/

Higher Secondary School Certificate

Jinnah Institute of Informatics [06/2018 – 2020]

City: Rawalpindi | **Country:** Pakistan | **Website:** https://jiic.edu.pk/

SKILLS

Programming languages

JavaScript / Python (computer programming) / Typescript / C++ / Java

Frontend & Mobile

React.js / Tailwind / Native Wind / React Native Expo / Next.js / Plasmo

Backend & Data

Node.js / SQL / Mongo db / Express.js / MySQL / REST API / PostgreSQL / Mongoose / OAuth 2.0, JWT / Stripe Payment / RDS Proxy

AI & Analytics

Langchain / Chroma DB / RAG / natural-language insights / Dashboard generation

Cloud & DevOps

AWS - EC2 / AWS, S3 / AWS Lamda / AWS Cognito / AWS-CDK / Appwrite functions / AWS Amplify / AWS VPC / Appwrite bucket / Github, Github actions / AWS ECS / AWS ALB / NAT gateway / SQS AWS / AWS DLQ / AWS Fargate / AWS CodePipeline

Healthcare & RCM Domain

X12 / HL7 / FHIR / EDI 837/835 / CPT / ICD Coding Data / Revenue Cycle Management (RCM) / AR Aging & Follow-up / Denial Management / Payer Analytics / EMR Data Integration / Timely Filing Rules / PHI De-identification / Waystar / A vaility / Claim Scoring & Prioritization / remittance parsing / Clearinghouse integration

PROJECTS

[Current]

Smart Notes AI • Contributes to a healthcare platform that transforms live or uploaded clinical conversations into structured progress notes, visit summaries,and billing information while keeping physicians in the review loop.• Develops patient, appointment, encounter, and clinical-document integration workflows across eClinicalWorks, CareCloud, Epic, and OracleCerner using REST/FHIR APIs, OAuth 2.0, JWT, and secure token handling.• Works across frontend, backend, and cloud services to support transcription, note generation, coding assistance, patient matching, anddelivery of approved documentation to connected EHR systems.• Supports HIPAA-focused architecture through role-based access, protected data handling, secure storage, auditability, and PHI-aware AI processing.

Link: https://smartnotesai.com/

[Current]

RCM Smart, Revenue Cycle Management Platform TypeScript, Next.js 16, React 19, Node.js/Express, MongoDB Atlas, AWS, Docker, OpenAI/Anthropic

- Built a multi-tenant healthcare claims-recovery SaaS spanning **132 REST endpoints, 27 data models and ~80K lines of TypeScript**, covering ingestion, scoring, workflow, analytics and reporting.
- Designed an **AI-assisted EMR format mapper** that normalizes arbitrary spreadsheet exports to a canonical schema, combining LLM suggestions with a deterministic heuristic fallback and automated claim-identity inference, removing per-client integration work during onboarding.
- Implemented an **explainable claim scoring engine** producing recovery score, probability, expected recoverable amount and a work/monitor/ignore decision from seven weighted factors, with configurable per-payer rule profiles.
- Architected and executed a **migration from API Gateway + Lambda to ECS Fargate behind an ALB**, removing cold starts, the 29s request ceiling and the 10 MB payload cap; retained event-driven Excel ingestion on Lambda behind **SQS with a dead-letter queue** for retries and poison-message isolation. Provisioned via **AWS CDK** as a reversible side-by-side cutover.
- Built a **retrieval-augmented natural-language analytics** feature (embeddings + cosine-similarity retrieval, streamed responses, rate limiting) and a **PHI de-identification pipeline** that anonymizes datasets before LLM processing.
- Implemented **fine-grained RBAC** with 30+ permissions plus per-widget grants, three-tier dataset access control, audited admin impersonation, and full action-level audit logging.
- Delivered a **configurable dashboard builder** (17 widget types, drag-and-resize layouts, PDF export), an operational reports catalog with Excel export, and streaming gzip backup/restore with round-trip verification.
- Maintained **148 unit tests** across scoring, ingestion, format-mapping, access-control and date-handling logic.

Link: https://rcmsmart.com/

Aquaponic Ecosystem Monitoring and Observation System (AEMOS) Designed a cloud-based IoT platform, AEMOS revolutionizing aquaponics farms management. Utilizing cutting-edge technologies such as REACT, DOT Net Core and MySQL. AEMOS offers real-time monitoring of key parameters like humidity, Oxygen and pH levels. AEMOS ensures optimal resource utilization employing growth, setting new standards for agricultural innovation.

Anzen Kernel Designed and developed a working OS kernel .The kernel can run processes and threads, processes follow the five-state mode, initialize processes and threads including their stack and related kernel data structures. There is a field named state in the PCB, which must be updated with the current state of the process. “Anzen Kernel” will use this field to collect statistics

Link: https://github.com/Jasim-BinUmar/Anzen-Kernel.git