KUMAR CHANDRACHOODA

AWS & Azure Cloud and Data Architect | Agentic AI Engineering | C#, .NET 10, Python & SQL | 3x AWS Certified

+44 7767 964982 | kumarchandrachooda@gmail.com | kumarchandrachooda.com | linkedin.com/in/kumar-chandrachooda

Right to work: UK Skilled Worker visa valid until 11 February 2027, I would need a certificate of sponsorship in future.

SUMMARY

I'm a Senior C#/.NET Developer and Cloud Engineer with over 8 years building cloud platforms and .NET services that other teams and agents can rely on. At PebblePad I lead AWS cloud architecture, from the security first, zero trust API framework in C# and .NET 10 that every new web application on AWS starts from, taking a new service's setup from 3 weeks to 2 days, to the CI/CD and Infrastructure as Code modules (AWS CDK, Terraform on Azure) now used by nearly 20 services.

I have modernised legacy systems into .NET Core microservices, introduced distributed caching (Valkey) so the platform scales horizontally, and was lead architect and tech lead of the analytical data product on AWS, turning 100 TB+ of legacy data into an AWS native, AI first analytics offering under UK GDPR and cutting typical report time from 3-5 minutes to under a minute.

Along the way I mentored 5 engineers and 2 apprentices and, with agentic, spec driven workflows in Claude Code, delivered 3-5x faster than the team's previous hand built delivery. I coordinate technical work, resources and teams across the business and keep non technical stakeholders accurately informed.

EXPERIENCE

Senior Software Engineer, PebblePad Sep 2023 - Nov 2026

- Lead engineer on the security first, zero trust API framework, written in C# and .NET 10, that every new AWS web service starts from, cutting new service setup from 3 weeks to 2 days. Services run on Lambda or ECS behind API Gateway, secured with Amazon Cognito and PKCE, Lambda and JWT authorizers, WAF and KMS, and monitored through CloudTrail, GuardDuty and Security Hub.
- Architected and built the C# and .NET 10 control plane for the multi tenant analytics product, with Clean Architecture, MediatR CQRS, EF Core for writes and Dapper for reads. One EF Core migration set provisions every tenant under database, schema or shared database isolation, with NUnit tests written first for authorisation and tenant isolation.
- Built the progress tracking service in .NET as a background service and a Minimal API that serves its own OpenAPI specification.
- Architected the analytical data product on the medallion architecture (Kinesis ingestion, AWS Glue (Spark) ETL, Amazon S3 Tables on Apache Iceberg, Lake Formation row level tenant isolation, all modularised in AWS CDK) as lead architect and tech lead. The brief was six months to turn 100 TB+ of legacy data (RDS PostgreSQL and self hosted MongoDB) into an AWS native, AI first analytics offering under UK GDPR. Recent records serve from an Amazon Redshift gold layer, and anything older than a year is archived to S3 Tables to keep query costs down.
- I took it through Head of Platform and InfoSec approval and also trained two senior and three junior developers within the team. Achieved AWS Certified Data Engineer - Associate on the way.
- Architected the production change data capture pipeline that feeds the lakehouse. Three independent Debezium Server instances on ECS Fargate capture RDS PostgreSQL and self hosted MongoDB (self signed TLS) into Amazon Kinesis, with EFS backed offsets, JMX Prometheus metrics, Quarkus health endpoints, single task scheduling against dual slot contention and a Kinesis → Firehose → S3 staging zone → Glue landing pattern. The Glue ETL moves 40 interdependent tables per database through extract → tenant enhancer → transform → load into S3 Tables, with the tenant id as the namespace, and Glue Workflows trigger each stage from bronze through silver to gold.
- Lead agentic development with agent tools and skills that carry the platform's infrastructure guidelines and deployment process, and multi agent workflows from specification through planning, development and testing, delivering data services 3-5x faster than the team's previous hand built delivery. Achieved AWS Certified Machine Learning Engineer - Associate.
- Lead implementation engineer for the CI/CD and plug and deploy Infrastructure as Code modules in AWS CDK with C#, now used by nearly 20 services. Set the build and deploy standards and put infrastructure under central human approval.
- Delivered the platform's GDPR controls. Tombstoning lets a person be forgotten without losing audit trails, data is masked as it is removed, and a storage limitation job on ECS Fargate removes data past its retention limit across every subsystem, an event driven compliance tool with Lambda checks and EventBridge transport.
- Introduced Valkey as the platform's distributed, multi layer, content aware cache, with the caching layer written in .NET, and standardised caching across services so the platform scales horizontally.
- Mentored 5 engineers and 2 apprentices while modernising a monolith into a .NET Core modular architecture.

Senior Product and Platform Engineer, Accenture Jul 2021 - Aug 2022

- Architected and built microservice platforms on Azure with their data pipelines and stores, delivered through a reusable Terraform library (App Service, Functions, APIM, AKS, Cosmos DB, Event Hubs, Front Door, SQL Managed Instance) scaled to a hub and spoke model across regions and environments, with CI/CD on Azure DevOps. Achieved Azure Solutions Architect Expert and DevOps Engineer Expert here.

Senior Software Engineer, Imaginea Technologies (now part of Accenture) Dec 2017 - Jun 2021

- Modernised legacy monoliths into .NET Core microservices (APIs, data models, integrations, analytics and reporting) and mentored 11 engineers and 5 apprentices, earning MCSA Web Applications and MCSD App Builder along the way. Ranked in the top 5% of Imaginea's developers by my reporting manager, with client work that led to new business wins.

Programmer Analyst Trainee, Cognizant Feb 2017 - Nov 2017

- Built ASP.NET Web Forms and MVC applications and proofs of concept, and earned the Microsoft Technology Associate (MTA).

PROJECTS

Agentic AI | Agentic Development (PebblePad, Lead) Agent tools and skills that carry the platform's infrastructure guidelines and deployment process, so AI coding agents follow its rules, and spec driven, multi agent workflows that take a specification to tested code, with human approval before the result is ingested into the RAG system behind the AI chat.
Stack: Claude Code, agent tools and skills, multi agent workflows, agent memory, RAG, MCP server, Amazon Bedrock

Agentic AI | Tutor Workspace Creator (PebblePad, Lead Developer) A chat interface where a tutor sets up an assignment workspace for students on any degree, answered only from PebblePad's own pedagogy resources and the authoritative sources we control. A crew of agents researches the brief, an LLM judge evaluates the candidates against a PebblePad curated set, and the tutor confirms the shape of the assignment and what it tests before anything is created. Prompt templates are hardened against prompt injection. A workspace is up in minutes instead of waiting on a centralised repository, and 50 users are on it today.
Stack: Amazon Bedrock (OpenAI gpt-oss), CrewAI and BeeAI agent crews, LLM as judge evaluation, prompt templates, human in the loop confirmation, hosted on AWS

Agentic AI | Developer Portal and agentic delivery (PebblePad, core lead team) An internal developer portal on AWS for autonomous agents specialised in API security, data analytics and infrastructure spin up. The agents use approved resources where they exist and otherwise create infrastructure modules to AWS best practice with zero trust for me to review and add to the pattern repository. A curated tool set carries the modules, and MCP servers let each developer push knowledge into a central second brain under AI evaluation and then human oversight. Workflows extend Claude Code's task breakdown. A bespoke triaging agent reads each developer's skills persona and distributes work through Azure DevOps, larger items to people and smaller ones to agents that raise pull requests for human review, and a daily summary goes to Teams. Used by 5 architects, 8 developers and 4 QAs.
Stack: Claude Code, agent tools and skills, MCP servers, bespoke triaging agent, AutoGen, Azure DevOps, Microsoft Teams, LLM evaluation with human oversight, hand built agent loops on Python, AWS Strands Agents, LangGraph and Amazon Bedrock, RAG

Agentic AI | Agent Memory & Knowledge (Developer) Hand built agent loops, harnesses and workflows in Python on AWS Strands Agents, LangChain/LangGraph and Amazon Bedrock, with explicit memory management. Internal documentation served to agents through RAG and a Model Context Protocol (MCP) server, and outputs checked by an LLM as judge evaluation harness and guardrails before they are accepted.
Stack: Python, AWS Strands Agents, LangChain, LangGraph, Amazon Bedrock, RAG, vector search, MCP server

Cloud & .NET | Infrastructure as Code: Terraform on Azure, AWS CDK on AWS (Lead) A reusable Terraform library covering the Azure estate (App Service, Functions, APIM, AKS, Cosmos DB, Event Hubs, Front Door, SQL Managed Instance) scaled to a hub and spoke model of deployments across regions and environments. On AWS, the CDK modules for every service the API framework and the analytical data product need, now used by nearly 20 services.
Stack: Terraform, AWS CDK, Azure DevOps, API Management, AKS, Lambda, ECS Fargate, API Gateway

Cloud & .NET | kumarchandrachooda.com platform (Architect) ASP.NET Core on AWS Lambda behind CloudFront with static assets on S3, defined in AWS CDK. The environments are an array in the stack, so adding a subdomain row creates the whole environment. Each host reads a launch profile that sets only the switches it names. A sandbox host is gated at the edge by a CloudFront Function checking basic auth against a KeyValueStore, and every deploy publishes the assets and invalidates the cache. Built with spec driven, agentic development, specification first, agents implementing in parallel Git worktrees and automated checks gating the result.
Stack: AWS CDK (C#), Lambda, CloudFront (Functions, KeyValueStore), S3, Route 53, GitHub, Claude Code

Data | Multi Tenant Analytical Data Platform (Architect and Developer) The analytical data product on the medallion architecture, with AWS native bronze and silver layers (Kinesis, AWS Glue (PySpark), Apache Iceberg on Amazon S3 Tables) and a gold layer on Amazon Redshift and multi tenant PostgreSQL fed through the API framework. One EF Core migration set provisions every tenant under database, schema or shared database isolation from a Clean Architecture control plane (MediatR CQRS, EF Core writes, Dapper reads).
Stack: C#, .NET 10, EF Core, Dapper, MediatR, PostgreSQL, Amazon Kinesis, AWS Glue, Amazon S3 Tables, AWS Lake Formation

Data | KC Star (Architect) An inhouse analytical data platform on PostgreSQL, nine versions in, built on a row based star schema where new dimensions and measures need no DDL, SCD2 history with SHA-256 version hashes and time travel, data quality scores and lineage on every row, pg_cron batch processing with partitioning and monitoring, dependency driven recalculation and permission aware measures.
Stack: PostgreSQL, PL/pgSQL, pgcrypto, pg_cron, SQL Server, Docker

EARLIER PROJECTS: INSURANCE AND ENTERPRISE PLATFORMS

- **Insurance document platforms (Document Generator, Smart Comm):** Solution Architect and Lead Developer. Set up the Master Data Management (MDM) and Operational Data Store (ODS) for policy document generation with InRule validation, event driven on Azure Functions, .NET 6, Terraform (Azure) and API Management.
- **Insurance quoting and agency systems (Affinity, FirstRate, Inzurezone):** Team Lead and Assistant Architect on the migration from AS400 and web forms to microservices with single sign on across platforms. Mentored the team and landed 2 large migration projects.
- **Internal platforms (Swipe-In, Employee Portfolio):** .NET Core and Angular web applications on Azure used by 2,000+ employees. Delivered the more complex modules on time.
- **AI Signtropreter (Prototype, Invoice Processing):** prototyped Azure Custom Vision recognising sign language with text to speech output, which later led to UiPath based automation for invoice processing with printed and handwritten text extraction.

EDUCATION

- MSc Advanced Computer Science (Cloud Computing), University of Leeds, Sep 2022 - Sep 2023, with Distinction
- B. Tech Computer Science Engineering, JSS Academy of Technical Education, 2016

CERTIFICATIONS

- AWS Certified Machine Learning Engineer - Associate, AWS Certified Data Engineer - Associate, AWS Certified Solutions Architect - Associate
- Microsoft Certified: Azure Solutions Architect Expert, DevOps Engineer Expert and Azure Developer Associate. MCSA Web Applications. MCSD App Builder (Programming in C#, Querying Data with T-SQL)

SKILLS

- **Agentic AI & LLM engineering:** multi agent systems, agent orchestration, AWS Strands Agents, LangChain, LangGraph, Amazon Bedrock, agent memory, Model Context Protocol (MCP) servers, retrieval augmented generation (RAG), vector search, LLM evaluation (LLM as judge), guardrails, context engineering, spec driven development, Claude Code
- **Languages, .NET & architecture:** C#, Python, TypeScript, SQL / T-SQL and PowerShell. .NET 10, ASP.NET Core Web API and Minimal APIs, OpenAPI, background services, EF Core, Dapper, MediatR (CQRS), NUnit, MassTransit, React and Angular. Microservices, Clean Architecture, event driven, serverless, distributed caching (Valkey)
- **AWS:** Lambda, ECS Fargate, API Gateway, SQS, EventBridge, Cognito, IAM, KMS, WAF, Route 53, PrivateLink, Kinesis, Glue, Lake Formation, S3, S3 Tables, RDS, DynamoDB, Bedrock, SageMaker, CloudFront
- **Azure:** App Service, Azure Functions, API Management, AKS, Event Grid, Cosmos DB, Azure DevOps
- **Data engineering:** ETL, streaming and batch processing, data modelling, medallion lakehouse, star schema, SCD2, Apache Spark (PySpark), Apache Iceberg, change data capture (Debezium), PostgreSQL, SQL Server, MongoDB
- **Infrastructure & security:** AWS CDK, Terraform (Azure), reusable infrastructure modules, CI/CD (Azure DevOps, GitHub), Docker, Kubernetes (AKS) and OpenTelemetry. Zero trust, OAuth 2.0 with PKCE, multi tenant isolation, GDPR, ISO 27001

