

Anwin Sen Padma

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Personal Profile

Passionate software engineer having 13+ years' experience in designing and building scalable distributed systems for product companies. Proficient in backend development technologies, Golang, Python, C++, Django Rest Framework, FastAPI, Kafka, Kubernetes, Terraform, JavaScript. Proven expertise in spinning off three software product lines development and designing software architecture. Experience in developing distributed backend microservices, REST API, 4G/5G telecommunication RAN and network protocol development, GUI Ground Control Station for drone piloting, IoT sensor data visualisation, geographical information systems and video management systems. I have 8 years of experience in managing an agile software product development team of software engineers and quality analyst engineers, establishing CI/CD a test-driven development workflow delivering distributed cloud Microservices, Android and Desktop GUI applications.

Core Skills: Golang, Python 3.8, Django Rest Framework, C++, Qt, Qt Quick, GDB, AWS, FastAPI, Docker, Terraform, Kafka, Kubernetes, Gitlab pipeline, MongoDB Atlas, Auth0, JavaScript, Microservices, Linux, Desktop and Mobile GUI application development, Agile Scrum

Employment History

Senior Software Engineer

May 2022 – present

Cradlepoint, Camberley, United Kingdom

- Design and develop backend microservices using Golang, Python, C++ and RedisDB
- Responsible for code review, best development practices and agile scrum development
- Develop 4G/5G LTE packet cores, protocol message handlers for RAN, AMF, MME, UPF
- Develop and debug applications using LAN Protocols: TCP, UDP, IPv4, IPv6, ICMP, DNS
- Develop metrics framework to publish metrics topics into Kafka
- Writes Gitlab CI/CD pipeline scripts to automate code quality control and testing
- Use Kubernetes to deploy, scale and manage docker containers
- Use Kafka publish-subscriber messaging system by creating topics using producer and consumer to achieve asynchronous communication message queue between distributed Django REST framework microservices

Lead Backend Developer

Nov 2021 – May 2022

Emperia Ltd, London, United Kingdom

- Lead agile scrum team, design and develop the scalable high performance backend REST microservice using Python FastAPI framework and MongoDB Atlas database
- Deployed AWS cloud infrastructure using Terraform IaC to AWS Lambda with Docker images from Amazon Elastic Container Registry
- Deployed Amazon API Gateway HTTP API and used Auth0 as custom JWT authorizer

- Achieved 95% code coverage with Pytest and implemented CI/CD using Github Actions workflows
- Deployed Strapi Headless CMS using Azure App Service

Staff Software Engineer

May 2013 – Nov 2021

Asteria Aerospace, Bangalore, India

- Lead agile scrum software development team of software engineers and quality analyst engineers building cloud, desktop, mobile solutions
- Defined and implemented the software team functional process
- Design and architect the microservices for drone data archival and data analytics using Python, FastAPI deployed on AWS Lambda and MongoDB
- Developed microservices to receive and relay live sensor data over secure websockets
- Design and architect Windows, Android GUI drone ground control station application using C++, Python, JavaScript, Qt, Qt Quick, QML, tech stack
- Developed an IoT deep learning embedded Linux application to classify objects from drone live video feed using Edge Azure Custom Vision and restream annotated video
- Designed and developed video playback, recording and video on screen display modules with Qt Quick, OpenCV, FFMpeg tech stack to visualize drone video
- Implemented CI/CD, test-driven development using Jenkins and Github webhooks

Software Developer

Dec 2011 – April 2013

VCreate Logic, Bangalore, India

Worked for the French client Sixense Soldata on construction sites risk mitigation application development. The C++, Qt GUI Windows application visualises the data as layers over geographical information systems from thousands of sensors placed across construction sites. Toulon underground tunnel in France stretching over 3.3 kilometres in length construction was monitored by Sixense Soldata. Custom QGraphicsItem were drawn and rendered over the QGraphicsView to visualise the sensor data.

Education and Qualification

Bachelor of Technology in Computer Science and Engineering

2007 – 2011

Model Engineering College, Cochin University of Science and Technology, India

Class 12, English, Computer Science, Physics, Chemistry, Maths

2005 – 2007

Christ Nagar School, Kerala State Higher Secondary Board, India

Skills

- Programming Languages: Golang, Python 3.8, C++, JavaScript
- Cloud stack: Terraform IaC, AWS Lambda, Amazon API Gateway, Docker, Amazon SQS, Auth0 JWT Authorizer, Azure App Service, Azure VMs, Kubernetes, Apache Kafka, Django Rest Framework, FastAPI, Qt, Qt Quick, MongoDB Atlas
- CI/CD and Code version control: Gitlab pipeline, Github Actions, Jenkins, git, Github
- Code Coverage/Unit Testing: Pytest, GTest
- Operating Systems: Linux, Windows, Android, MacOS
- Media and computer vision libraries: FFMpeg, OpenCV, libvlc, GStreamer
- Tools: Wireshark, JIRA, Slack, Confluence, Visual Studio Code, Qt Creator