

Amritesh Amrit

Master's in CS @ USC | 2 YOE at JPMorgan | PyTorch, AWS, Full-Stack | Applied AI & Research Enthusiast
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Education

University of Southern California, Los Angeles, CA, Master's in Computer Science Aug 2025 - Present

- Incoming Student at the Viterbi School of Engineering (GRE Quants Score: 162)
- **Coursework:** Analysis of Algorithms

PES University, Bengaluru, India, BTech. in Computer Science & Engineering Aug 2019 - May 2023

- GPA: 9.13/10 (Awarded Specialisation in Machine Intelligence & Data Science)
- Received Prof. MRD (6x, awarded to top 20%) & CNR Rao (1x, awarded to top 5%) Scholarships

Experience

Software Engineer - I, JP Morgan Chase & Co. – Bengaluru, India Jun 2023 – Jun 2025

- Built a microfrontend architecture & modern UI test suite; delivered scalable web-based tools using ReactJS & Spring Boot with MS SQL & ETL pipelines using AWS Glue, S3, & PySpark.
- Optimized system performance by reducing SQL job duration by 75% & UI pipeline runtime by 65%; developed dashboards & automated alerts for trade monitoring.
- Built T+1 compliance dashboards to help global teams track trade failures across Fixed Income, Equities, Collateral, Commodities, & other business lines.

Software Engineer Intern, JP Morgan Chase & Co. – Bengaluru, India Feb – May 2023 & Jun – Jul 2022

- Built a UI to control & monitor 6+ Kubernetes services, enabling real-time toggling via APIs, log retrieval, & pod-level access for improved system observability.
- Migrated 4 key Android screens from Java to Kotlin & improved readability & maintainability across 80+ files.
- Worked in Agile teams & cross-functional teams to ship infrastructure tools & scalable full-stack systems.

Publications

Localised Land-Use Classification Using U-Net and Satellite Imaging Jan 2024

DOI: 10.1007/978-981-99-6984-5_15

Amritesh, Mohammed Masood Owais, Vaibhav Vemula, Amityush Amit, S. Natarajan

Awarded Best Paper Award at the 2nd International Conference on Intelligent Systems and Applications (ICISA 2023)

Projects

Localized Land-Use Classification Using U-Net and Satellite Imaging Jan - Dec 2022

Guide: S. Natarajan

- Led a four-member team & implemented a U-Net model with ResNet backbone for satellite image segmentation to classify land use types, including city, forest, roads (via QGIS), water, & unused land.
- Conducted ML experimentation, tuning, & evaluation achieving an IoU score of 0.68 against ground truth.

Treasure (Startup) - Co-founder & Lead backend developer Jan 2022 - Jan 2023

- Raised \$200K in seed funding for a platform enabling micro & nano influencers to build brand partnerships beyond barter-based models.
- Designed RESTful APIs using Node.js microservices with MySQL, S3, SQS; added NFT generation, cron jobs, & user auth.

Merobot – GAN-based Bot System - Research Intern, CVIT, IIIT Hyderabad Github (Jan - Dec 2021)

Guide: Ravi Kiran

- Built backend services for a real-time bot system that interacted with a GAN model to generate images based on user-provided inputs.
- Enabled image-editing workflows in which each user modification triggers new GAN outputs, supporting interactive visual feedback.

Technologies & Skills

Languages: JavaScript, Java, Python, SQL, Swift, HTML5, CSS **Frameworks:** ReactJS, Spring Boot, Node.js, Express, UIKit

Tools: AWS (Glue, EC2, ECS, S3, SQS, PySpark, Lambda), MongoDB, Git, MySQL, MS-SQL Server, PostgreSQL, PyTorch

Certifications

AWS Certified Cloud Practitioner, Amazon Web Services — Valid till Sep 2026

Credential Link

30 Days of Google Cloud Program, Google — Completed Dec 2022

Credential Link