

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

Technologies & Skills

Languages: JavaScript, Java, Python, HTML5, CSS, SQL, Swift

Frameworks: ReactJS, Spring Boot, Node.js, Express, SwiftUI, UIKit, NextJS, Pytorch

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

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.
- Delivered T+1 compliance dashboards (using ReactJS) 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 Github (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

- Developed 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.

Certifications

AWS Certified Cloud Practitioner, Amazon Web Services

Credential Link

30 Days of Google Cloud Program, Google

Credential Link