

# Amritesh Amrit

aamrit@usc.edu | +91-9108085826 | <https://linkedin.com/in/amriteshamrit> | [github.com/ammrit2312](https://github.com/ammrit2312)

## 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, Terraform, Github Actions

## 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.
- Delivered T+1 compliance dashboards (using ReactJS) to help global teams track trade failures across Fixed Income, Equities, Collateral, Commodities, & other business lines.
- Optimized system performance by **reducing SQL job duration by 75% & UI pipeline runtime by 65%**.
- Developed user-specific alert systems to monitor trade failures, **reducing the need for manual oversight by 30%**.
- **Winner of the JP Morgan Chase Code for Good** hackathon 2021.

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

- Built 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.

**Research Intern**, CVIT, IIIT Hyderabad Jun – Dec 2021

*Guide:* Ravi Kiran

- Engineered backend services for a real-time bot platform, seamlessly integrating a GAN model to generate user-customized images through an custom interactive ReactJS Canvas component.
- Developed a ReactJS frontend for an image-editing workflow, with the GAN model deployed via Flask APIs on a private server, enabling real-time interactive edits with instant visual feedback.

## Publications

**Localised Land-Use Classification Using U-Net and Satellite Imaging** 10.1007/978-981-99-6984-5\_15

- 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**.
- **Awarded Best Paper Award** at the 2<sup>nd</sup> International Conference on Intelligent Systems and Applications (ICISA 2023)

## Projects

**Pothole Detection – YOLOv5**

- Engineered a pothole detection model using YOLOv5, **enhancing the accuracy by 27%** allowing user complaints to be submitted quickly using the chatbot.
- Collaborated with cross-functional teams to deliver this project, **accelerating the project timeline by 30%**.

**Treasure (Startup)** - Co-founder & Lead backend developer [Github](#)

- 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.

**Why Waste? Website** [Why Waste?](#)

- Designed and implemented the main website for Why Waste? moving it from wordpress to ReactJS, **reducing the development time by 40%**.
- Deployed the RESTful API & UI on Vercel using Github Actions, **lowering the operational cost by 38%**.

## Certifications

**AWS Certified Cloud Practitioner**, Amazon Web Services

[Credential Link](#)

**30 Days of Google Cloud Program**, Google

[Credential Link](#)