

Abilaash S S

+91 6383482866 abilaashss14@gmail.com Chennai,India  LinkedIn  GitHub

Professional Experience

Zocket.ai AI Engineer Intern

12/2025-Present | Chennai,India

- Working on the agent stack for Bacon.ai, a creative engine for marketers to create studio-quality images, cinematic and UGC video ads using Agent-to-Agent (A2A) communication, agent orchestration, and co-designed agent architecture.
- Developed Zocket Insights Dashboard, delivering tailored Ad, Adset, and Campaign-level recommendations by leveraging AI Agents for Ad performance analysis and optimisation, Campaign-level insights to enhance market strategies, SQL Query generation agent for dynamic data retrieval
- Implemented a production-level Budget Allocation strategist, that gives precise budget allocation strategies based on the brand presence in the internet, and their existing performance, helping brands double their ROAS.
- Developed a discord-like-UI for an instagram comments scrapper using browser-use, gpt-4o, to perform sentiment analysis and moderate comments based on its sentiment.

BNY SDE Intern - Wealth Services Engineering

06/2025-08/2025 | Chennai,India

- Conceptualized and developed "BNY Code Assist", a copilot tailored for internal frameworks, by implementing Retrieval Augmented Generation(RAG) and multi-agent AI systems to automate code assistance, knowledge search, and workflow optimization for engineering teams
- Enhanced Figma2Code by deploying Retrieval Augmented Generation (RAG) and AI agents to generate component code for internal frameworks directly from UI designs, streamlining developer productivity.
- Modernized and rewrote legacy UI components with MDC (Material Design Components) styles in Angular 16, removing key blockers to enable seamless migration to Angular 19.
- Optimized the monorepo build pipeline by 50% through leveraging a dependency graph and parallelized build and runner configuration, enabling developers to quickly fix and deploy to production.

Tata Steel ML Intern

12/2024-02/2025 | Chennai,India(Remote)

- Developed Custom Segmentation algorithm to cut out cross section of TMT Bar, and analyse its quality
- Implemented a Vision-based approach to perform Ring Test and Rib Test, analysing the inter and intra rib-width, and analyse concentric circles to ensure quality.
- Optimised the quality assessment pipeline and reduced the error by 30% and increased the efficiency by 45% than existing manual interventions.

Space Applications Centre, ISRO Research Intern

06/2024-08/2024 | Ahmedabad,India

- Used Explainable AI and other feature engineering techniques to bring down the parameters required for modeling by more than 65%.
- Modeled an efficient wind retrieval System using geometric and surface parameters from GNSS-R Reflectometer Data by stacking different algorithm's prediction to the final model.
- Surpassed the existing error rate of NASA by reducing the error in wind retrieval by 70%
- Increased efficiency in retrieval of ocean winds by 20% as compared to NASA.
- Wind Retrieval System to be used in upcoming Microsat-2c satellite mission of ISRO

Sony Research India ML Research Intern

02/2024-07/2024 | Chennai,India(Remote)

- Developed a Surface Defect detection algorithm for detecting non-invasive cracks on oil and gas pipelines

- Optimised the object detection pipeline to ensure efficient and secure transfer of detected image from Model Endpoint hosted on EC2 Instance using FastAPI, processed on Raspberry Pi, to Amazon RDS.
- improved the Mean Average Precision from 56% to 78% through improvements in the model pipeline.
- Curated custom dataset for the use case due to unavailability of dataset in public.

Samsung R&D Institute Research Intern

01/2024-06/2024 | Bangalore,India(Remote)

- Implemented a memory and compute efficient Offers Retrieval System for Samsung Products from e-commerce websites.
- Implemented Retrieval Augmented Generation(RAG) that involves efficient scraping of Mobiles and Tablets offers from e-commerce Websites and using them to serve user's queries for seamless shopping.
- Used RAG Agents to improve the cost efficiency by 24 times as compared to redundant finetuning of LLMs.

Education

SRM Institute of Science and Technology

2022-2026

B.Tech Computer Science with Specialisation in Artificial Intelligence and Machine Learning

Chennai,India

CGPA-9.98

- Department Rank 1 Holder for 3rd consecutive year for Scoring 10 CGPA and received performance based merit scholarship for a total amount of approx. 4Lakhs INR

Maharishi Vidya Mandir Sr. Sec School

2020-2022

Class - 12(PCM) : 91.2%

Chennai,India

class - 10 : 96.4%

Received the Best Outgoing Student award for Excellent Academic and Cultural records

Publications

- **RAG-X: Density Adaptive Path Sampling for Enhanced Knowledge Graph-based Retrieval Augmented Generation**
2025 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunications (iCONCEPT), 2025
- **ROS2-Simulated In-Pipe Robotic Monitoring System with Machine Learning based Defect Detection and Simulink Torque Analysis with GUI Controlled Navigation**
International Journal on Interactive Design and Manufacturing (IJIDeM)

Projects

- **FinSense** *React.js, Next.js, Tailwind CSS, LLMs, CRAFT, Florence-2-large, TrOCR*
FinSense is a one-stop solution for hassle-free loan application. Agentic Judge that decides on loan eligibility for the user. Super-fast document verification, face recognition, and identity detection.
- **Pomodoro.ai** *HTML, CSS, React, TensorFlow*
AI-powered Pomodoro timer to boost productivity. Timer is controlled based on the user's presence via camera and automatically resets when the user leaves the workspace.

Skills

- **Programming Languages:** Java, Python, C, C++, SQL
- **Development:** Machine Learning, Deep Learning, Generative AI, Large Language Models, AI Agents, MCP, A2A, HTML, CSS, JavaScript, React.js, Next.js, Angular.js, Typescript, SpringBoot, Redis, gRPC
- **Database:** SQL, PostgreSQL, Amazon Redshift DB, MongoDB, Firebase, Neo4j
- **Cloud:** AWS (S3, EC2), Oracle Cloud

Achievements

- Runner up in **BNY's Eliza Hackathon** among **400+ interns globally**.
- **2nd Place** in **BNY Service Design Jam Hackathon** held at IIT Madras.
- Secured Rank 92 in **Amazon ML Challenge 2024**.
- **2nd Runner-up** in Standard Chartered Hackathon 2025. Bagged a cash prize of 10,000 and merchandise.
- Selected for the prestigious **Harvard Ventures - TECH Summer Program**.
- Received recognition from Directors and Heads at **ISRO** for developing a reliable wind retrieval system for the mission **MICROSAT-2C**.
- Awarded the **Performance-Based Merit Scholarship** for securing **1st Rank** in the department.
- **Winner** of **Smart Campus Hackathon 2023**, conducted by SRM Institute of Science and Technology.
- Finalist in **Smart India Hackathon 2023** and 2024.
- Secured **AIR 3** in the **WS Olympiad**.