

# Jovian Shilton Dsouza

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## Skills

**Languages:** JavaScript, TypeScript, Solidity, Rust, Python, Java, Kotlin, C/C++

**Technologies & Tools:** ReactJS, NextJS, Express, ReactNative, TailwindCSS, Ether.js, Web3.js, Solana.js, Hardhat, Docker, Kubernetes, Redis, PostgreSQL, Prisma, Tensorflow, Pytorch, Android

## Work Experience

**Samsung R&D, Bangalore**

Feb 2022 - Present

**Senior Software Engineer**

- Led the commercialization of the "Smart Capture" feature for Samsung flagship devices, earning a trip to South Korea for this achievement.
- Developed a Bi-GRU model with Retvec Embedding, outperforming Samsung UI 6.1 by 10% in accuracy (90% for English, 87% for Korean), while reducing the library size from 60MB to 0MB through a custom TensorFlow Lite implementation.
- Developed an on-device MobileGLINER achieving performance comparable to state-of-the-art NER models, while reducing parameter size by 70%. This got selected for Samsung Best Paper.
- Devised Smart Reply functionality using an on-device Gemma 2B model with Retrieval-Augmented Generation (RAG), enhancing the efficiency and accuracy of automated responses.
- Created custom LoRA models for the ScreenAI application, capable of extracting useful information on screen, targeted for S25 flagship devices.
- Tensorflow, Pytorch, NLP, LLM, GenAI, Android, Kotlin, Docker, Bazel, Python, Kotlin, Java

**Okto CoinDCX, Bangalore**

June 2024 - Present

**Freelance Software Engineer**

- Developed a React Native SDK, incorporating strongly typed and secure pincode setting using WebAssembly (WASM), efficient rendering, and wrapper functions for blockchain libraries. Received recognition as the top open source contributor during an Okto community call ([here](#)).
- Created the Lifafa Red Envelope application, powered by Solana blockchain contracts and the Okto SDK, enabling users to create and send red envelopes. This application was demonstrated to high-value clients at Okto.
- Implemented a React SDK, integrating all Okto API functionalities with support for Google Auth, Telegram Auth, and OTP authentication.
- ReactJS, ReactNative, NextJs, TailwindCSS, Solana.js, Rust, WASM, Yew.rs

**SkyLark Labs**

June 2021 - August 2021

**ML Engineer Intern**

- Developed a violence detection system using 3D Convolutional Neural Networks (3D CNN)
- Explored pre-trained state-of-the-art models in video classification and video detection
- Worked with YOLO, CornerNet, and CenterNet for enhanced object detection capabilities
- Completed proof of concept (PoC) and demonstrated the system for detecting violence in taxi cab services
- Achieved a lightweight (<10MB) yet accurate model, suitable for deployment on dash cam devices
- Tensorflow, Pytorch, Pytorch Lightning, Python, Android

## Education

**National Institute of Technology Goa**

Aug 2018 - May 2022

B.Tech in Computer Science and Engineering

**CGPA: 9.13/10**

Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Data Mining, Advance Data Structures and Algorithms, Information Retrieval, Image Processing

## Project Work

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- **Picoplay (On Going):** Picoplay, a global real-time math puzzle platform with features including user authentication via Solana blockchain wallet, live leaderboard, and responsive UI. Won 2nd place in Bonkathon for Consumer facing apps. Utilized Next.js, Tailwind CSS, Express.js, Redis, PostgreSQL, deployed using Docker and hosted on Railway.app.(demo).
- **Lifafa (July 2024):** Lifafa, a red envelope gifting powered by blockchain, that allows to gift crypto to your loved ones. Powered by Solana Blinks and Actions. Utilized Next.js, Tailwind CSS, Solana smart contracts(demo).
- **AskAnon (July 2024):** AskAnon, an application that allows users to anonymously ask, compliment, and connect with their favorite Crypto Twitter personalities. Powered by Solana Blinks and Actions. Collaborated with SuperTeam members to bring the project to life. Won 2nd place in Blinkathon in Solana Startup Village. Utilized Next.js, Tailwind CSS, Express.js, Blinks, Solana, Web3 Auth(demo).
- **BitBirdie (April 2024):** BitBirdie is an AI-powered cryptocurrency wallet designed to simplify web3 transactions using natural language processing. Built with Okto wallet and LLM technology, BitBirdie aims to make crypto accessible to all. Won 3rd place in Solana Hackathon for Okto Track and Aspecta AI Buildathon(demo).
- **PayChatAI (March 2024):** PayChatAI is a platform that empowers users to create, instruct, and monetize GPT models effortlessly. With our user-friendly interface, you can seamlessly craft and fine-tune your own ChatGPT-like models tailored to your specific needs. Leveraging Nevermind's integrated payment widget, creators can monetize their models with ease. Won Nevermined Bounty for Near Hackathon. (demo).
- **ChecKnights (July 2023):** ChecKnights is a decentralized chess battle platform where players compete in real-time matches, leveraging blockchain technology and NFT rewards. This was developed using the Flow blockchain, featuring real time multiplayer gaming and betting (demo).
- **EnigmaPaste (June 2023):** Created a decentralized Pastebin platform leveraging IPFS and Ethereum smart contracts. Empowers users to securely store and share text data without reliance on a centralized authority. Facilitates immutable storage and retrieval of content, ensuring transparency and integrity while fostering a distributed network for information exchange (demo).
- **AI NFT (Feb 2023):** Developed ERC721-based AI-NFT Contract on Ethereum Goerli test network. Utilized ERC-721 standards for unique, non-fungible tokens representing distinct assets. Integrated Text-to-Image AI for NFT creation, enabling minting and trading on OpenSea (demo).
- **Jovi Dex (May 2023):** Created decentralized exchange using UniswapV2 protocol, enabling EVM token swaps. Leveraged smart contracts and liquidity pools for trustless transactions (demo).

## Awards and Certificates

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- Won 2nd place in Bonkathon for Picoplay in Consumer facing apps category. (July 2024)
- Won 2nd place in Blinkathon for AskAnon in Solana Startup Village (July 2024)
- Graduated from Solana Encode Bootcamp (July 2024)
- Received recognition as the **top open source contributor** during an Okto community call (June 2024)
- **Spot Award** (April 2024): Optimized RetVec embedding layer, reducing dependencies from 50MB to 0MB.
- Won 3rd place in Solana Hackathon for Okto Track (April 2024)
- Won Nevermined Bounty for Near Hackathon (March 2024)
- **Team Awesome Award** (Jan 2024): Commercialization of Smart Capture for Flagship Samsung devices.
- **Spot Award** (May 2023): BiGPTe Model, NB data analysis, evaluation logic automation and vocab size adaptation
- **Decentralized Applications** by University at Buffalo (Sep 2023)
- **Blockchain Basics** by University at Buffalo (April 2023)
- Microsoft AI Scholar (2021)

## Hobbies and Interests

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- **Fitness Freak:** Gym, Zumba, Yoga, Cycling, Swimming
- **Youtube Channel:** Jovi Tech.
- **Book Lover:** Atomic Habits, Deep work, etc.