

# Sanjay Bhaambhu

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## Solo Projects

### CAPTAIN [[bhaambhu.com/captain](https://bhaambhu.com/captain)]

Django (python), PostgreSQL, NextJS, React Native

An **open-source** learning app with a **Django** backend, **NextJS** front-end for staff, and a **React Native** app for learners. It's an intelligent tutoring system that can be used to teach any subject while adapting the course to the learner. The system is made in such a way that no piece of knowledge needs to repeat.

### SHADES: Combat [[bhaambhu.com/shades](https://bhaambhu.com/shades)]

C#, Unity3D, Realtime Multiplayer (Concurrent), Enemy AI, Google Play Services, In-App-Purchases, Ads

A 3D top-down shooter game for the android platform – **1.5 million players**, **4.5-star rating** from **21K reviews**. The biggest learning was **real-time concurrency control** – managing multiple players that are accessing and manipulating the same resources, in both **peer-to-peer** (LAN) and **client-server** (Online Multiplayer) environments.

### ScaleVote [[bhaambhu.com/scalevote](https://bhaambhu.com/scalevote)]

Java Spring Boot, Kafka, PostgreSQL

A minimal election conducting system I put up for learning **Spring Boot** and experimenting with scalability and real-time processing capabilities of **Apache Kafka**.

### phpWikiCMS [[bhaambhu.com/phpWikiCMS](https://bhaambhu.com/phpWikiCMS)]

PHP, MySQL

An open-source framework that helps create a **wiki style page management system**, supports **tree-style relationships** and their management and viewing.

### Unity Ludo Framework [[bhaambhu.com/unity-ludo](https://bhaambhu.com/unity-ludo)]

Unity3D, C#

An open-source **Unity3D** project for creating any type of Ludo game. Currently setup as a mobile-based 2D Ludo game with **working AI**. Can be easily extended to a 3D game or a completely different Ludo game if needed.

### Portfolio [[bhaambhu.com](https://bhaambhu.com)]

React, Next, TypeScript, Tailwind

My personal website/portfolio project. It is a **Next JS** project that utilizes **TypeScript**, **Tailwind CSS** and static export. It has a **responsive design**. Feel free to use it and make your own portfolio with it.

## Education

Qualified GATE, UGC NET, JRF, JEST, HTET, 6 International Publications, 3 International Conferences.

**2018 – 2022**

Doctor of Philosophy (PhD) under UGC Fellowship in Computer Science and Engineering – CDLU.

**2014 – 2017**

M.C.A. - Kurukshetra University – **70.71%**

**2011 – 2014**

B.Sc. Computer Science – **80.72%**

## Work Experience

### Software Engineer @PPFAS AMC

February 2023 – Present

- ▶ Upgraded existing APIs, optimized response structure, nomenclature and performance of various tasks, added support for multiple clients.
- ▶ Moved existing apps to TypeScript, lead a team of developers building new projects in React-Native, Remix.js, Next.js, etc., ensuring clean-code and robust systems.
- ▶ Established documentation standards and streamlined processes for development, testing and releasing products.

### Senior Research Fellow @CDLU

October 2018 – October 2022

- ▶ Researched on AI and Intelligent Tutoring Systems, built various advanced algorithms involving graphs & trees, curated datasets, trained ML models.
- ▶ Taught Data Structures, Advanced Algorithms and Compiler Design to classes of MTech and MCA.
- ▶ Published 4 Research Papers in Indexed Journals and Presented 3 Research Papers in International Conferences, earning a PhD.

### Web Developer @OOPS InfoSolutions

September 2016 – October 2018

- ▶ Building full-stack web projects using php & MySQL, and android apps using Java and SQLite.
- ▶ Meeting clients, understanding business needs, planning, prototyping and designing architectures of applications, and illustrations for clients.

## Skills

### Back End

Python, Java, php, NodeJS (NextJS, RemixJS, Express), Django, Spring Boot, Kafka, REST APIs, PostgreSQL, MongoDB, Supabase, Prisma, Heroku, Vercel, Railway, Jekyll, Expo, AWS.

### Front End

HTML, CSS, JavaScript, TypeScript, React Based Frameworks, React Native, TailwindCSS.

### Tools & Concepts

Object Oriented Design, MVC, git, Docker, Linux, Unity3D, Android Studio, Figma.

## About Me

I discovered my passion for software development in 2011 while building Android apps using Java.

Being a passionate software engineer with a PhD, I am always interested in writing high-performance clean-code that is easy to test and debug, and adapts well to scale.

I am known among my peers for my attention to detail, and building user-centric software.