

Angad Kambli

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Education

Indian Institute of Technology, Roorkee

May 2023

B.Tech. in Computer Science and Engineering (CGPA: 9.085 / 10)

Roorkee, Uttarakhand

- **Activities** : Was a developer in a campus technical group, **SDSLabs**. Organized lectures, hackathons and other events with participation of 500+ students along with maintaining, developing and testing a number of projects.

Experience

Oracle

July 2023 – Present

Applications Engineer | **Java, PL/SQL**

Hyderabad

- Conducted exploratory analysis and developed a **proof of concept** for rewriting and porting legacy UIs to modern standards in Oracle's proprietary framework **Redwood**, aligning with latest internal requirements, while ensuring functionality preservation and **performance enhancement**. Guided the team in utilizing these findings to successfully convert multiple additional UIs.
- Collaborated across teams to implement asynchronous bulk processing logic with **checkpointing** capabilities in **Java**, facilitating **rollback** in case of failure and providing users the ability to **monitor** progress and abort processes.
- Delivered a high-performance **PL/SQL** validation API that seamlessly integrated with other products.
- Triaged and fixed bugs along with implementing feature enhancements within a critical timeline.

Oracle

18 May 2022 – 12 July 2022

Applications Engineer Intern | **Python, Matplotlib, Plotly, Pandas**

Hyderabad (Remote)

- Analyzed an existing **Subject Line Optimization** model for Email marketing, pinpointing scenarios where the model underperformed. Developed and implemented proof of concepts for several solutions to address these issues.
- Iterated upon and implemented a **topic labeller** for subject lines employing a **Zero-Shot classifier** and a customized version of **Google Taxonomy**. Applied this labeller to categorize test data into topics, enabling the identification of performance trends across topics within the model. **Productized** the topic labeller for broader team use.
- Achieved performance enhancements by implementing models based on alternative algorithms such as **BM25** and optimizing existing models. Developed an **ensemble model** that integrated outputs from both the existing model and the BM25 algorithm, resulting in improved predictive accuracy.

Google Summer Of Code

June 2021 – August 2021

Contributor | **C++**

Remote

- Implemented the **pseudolocalization** feature in the Godot Engine - a cross-platform, **free and open-source** game engine.
- Researched upon and added pseudolocalization features found in state of the art applications. Pseudolocalization simulates **localization** (by adding diacritics, simulating right-to-left-text, text expansion, etc) to ease the **internationalization** flow in multilingual projects.

Projects

ProcSDF (B.Tech Thesis Project) 🧑‍💻 | **C++, OpenGL, Raymarching**

- ProcSDF is an **extensible node-based 3D modelling tool** written in **C++** that enables users to create 3D scenes in a fully procedural manner. It uses an **SDF based raymarching** approach to render the scenes and involves **on-the-fly shader generation**.
- Ideated upon and implemented a shader generation algorithm that compiles a user-defined node graph into shader code.
- Designed and developed the architecture of the application, implemented the rendering flow and other core functionalities.

Outrun Chase 🎮 | **Godot Engine, NodeJS**

- Outrun Chase is a 3D multiplayer racing/shooting game made in **Godot Engine** shipping on both desktop and Android.
- Implemented key gameplay mechanics and user interface elements in collaboration with designers. Enhanced multiplayer functionality by integrating a minimal **NodeJS** server-based approach and optimizing **LAN-based multiplayer** flow to improve matchmaking usability and intuitiveness.
- This was showcased in the July 2021 edition of **GodotCon**, a flagship event hosted by the maintainers of Godot Engine viewed by 35k attendees.

Rootex 🧑‍💻 | **C++, Dear ImGui**

- Rootex is a **3D game engine** written in **C++**, based on a **semi-ECS** (Entity Component System) architecture. It uses **Dear ImGui** for rendering the GUI. It was featured by Gamefromscratch, a popular YouTube channel with 232K+ subscribers : [video link](#).
- Designed and implemented a content browser for intuitive asset browsing from the local file system, ensuring the engine maintains an average frame rate of **50 FPS**. Additionally, implemented a dialogue system in **Lua** with a **user-friendly API** for scripting interactions.

Quizio | **JavaScript, ReactJS, NodeJS**

- Quizio is SDSLabs' in-house testing platform built on the **MERN** stack. It enables users to host and attempt quizzes.
- Iterated upon and implemented significant frontend flows, taking ownership of the entire product by addressing various miscellaneous bugs. Successfully completed all required flows within a tight two-month schedule in preparation for the internal recruitment test for our campus group SDSLabs.

Technical Skills

Languages: C++, JavaScript, Rust, Dart, Python, HTML, CSS, PHP, PL/SQL, Java

Technologies: React.js, Node.js, Pandas, Plotly, Matplotlib, Blender, Figma, Flutter, Godot, Visual Studio, Git