






NIRANJAN GIRHE

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EDUCATION

3rd Year Bachelor of Technology

MIT Academy of Engineering, Pune, India

 August 2019 – Ongoing

- B.Tech in Computer Eng.
- CGPA: 9.74 out of 10. (92.53%)
- JEE mains percentile: 94.55%

RESEARCH EXPERIENCE

Research Internship in Serious Games

Internship at Ontario Tech University, Canada (Mitacs GRI)

 May 2022 – Aug 2022


Adv: Jeremy Bradbury

- **Task:** To design and implement serious games. (Threaded Paws and Robo-Bugs)
- **Description:** developed serious game that can help students grasp many concurrency concepts and pitfalls of concurrency, like deadlocks data-race and many more. This block-based game with simulated outcomes was created using the Unity game engine. With intuitive form-based level designing and truly scalable game support code.
- **Tech stack:** Unity, Blender, Krita, C#, Audacity

EXPERIENCE

Web-based elective allocation system

Internship at MIT Academy of engineering

 June 2021 – August 2021

Adv: Mrs. Ranjana Badre

- **Problem Statement:** Migrated inefficient manual elective allocation to an automated system on a web-based platform.
- **Solution:** Centralized automated process set up on a web portal for elective allocation on the basis of match between user preference and respective availability with CGPA-led prioritizing.
- **Tech stack:** HTML, Javascript, Firebase - Authentication, Firestore database, Materialize CSS
- **Application:** This portal is being used by our Institute for Minor subject allocation.

Game Development

Internship at Salvation Games

 June 2020 – August 2020

Adv. Mr. Harshit Solanki

- **Task:** To Develop a Hyper casual Android game
- Developed an android game using C# on unity. Designed character movement mechanics and physics. Also including variable speedrunning, variable height jump, jet physic, and in-game shop.
- **Tech stack:** Unity, C#, Blender, Krita, Audacity

RC Aircraft Development

Internship at MIT Aero club

 June 2020 – July 2020

Adv. MITAERO club

- **Task:** To Design an RC Plane and Quad-copter
- Worked on RC Plane and Quad-copter design and developed a working RC Plane and Quad-copter in Virtual mode and tested in ANSYS software. And also researched applications of RC aircraft.
- **Tech stack:** Fusion, Blender, ANSYS, Betaflight

PUBLICATIONS

Conference Proceedings

- Girhe, Nirnanjan et al. (2023). "Shetkari Mitra App—An Application to Maximize the Profit of Farmers". In: *Advances in Communication, Devices and Networking*. Ed. by S Dhar et al. Singapore: Springer Nature Singapore, pp. 111–127. ISBN: 978-981-19-2004-2.

https://link.springer.com/chapter/10.1007/978-981-19-2004-2_10

SKILLS

Unity game engine

Blender

3D Animation

Unreal

C++

C#

Java

Python

Android Studio

HTML

Javascript

Firebase

SQL

MongoDB

NodeJS

Git & GitHub

Azure

Adobe XD

AIML

ACHIEVEMENTS & CERTIFICATIONS



HakkerRank Python Challenge

Secured 1st rank for solving 6 CP questions the fastest



Smart India Hackathon - Winner

Built labor complaint registration web portal with advance feature like speech to text in regional language, easy complaint escalation and text summarisation.



Microsoft Azure fundamental (AZ 900)



Microsoft Azure AI fundamental (AI 900)

RESEARCH PROJECTS

Smart Traffic System to optimize the city traffic

Project at MIT Academy of engineering

 Jul 2021 – Ongoing

Adv: Dr. Avinash Bhute

- Devised a mathematical formula to compute Optimal estimation of green light interval based on traffic flow rate obtained via sensors; Simulated in Unity.
- **Tech stack:** Unity - C#, Python, Firestore Database, IoT.

Shetkari Mitra - Mobile app for farmers

Project at MIT Academy of engineering

 Aug 2020 – Mar 2021


Adv: Dr. Avinash Bhute

- Built user-friendly platform for connecting farmers and agricultural experts on a forum; Several data-based features to assist farmers
- The research was presented in ICCDN-2021 conference in SMIT, Sikkim. Publication details mentioned below.
- **Tech stack:** Android Studio - Java, Firebase - Authentication, Firestore Database, API, Picasso, JSON Parsing, Web view

PERSONAL PROJECTS

NGAnime Android application

Personal Project

 June 2021 – August 2021

- Developed an android application which compiles online Anime streaming platforms at one place. Implemented advance features like sharing anime's using deep linking, export and import data like watch later and anime tracking.
- **Tech stack:** Android studio, Java, JSON, Git & GitHub, Google Analytic.

Killing Tech - Indie Game development and 3D Animation

Unity and Blender 3D Animation

 August 2020

- Developed 3D FPS multiplayer Game with low poly graphics using unity and blender. Used Photon 2 engine for networking.
- Experienced in Rigid body, fluid, cloth, particle and fire simulations and animation in Blender open source software.

Split It - split group expenses

Web Development

 January 2022

- Developed a web-based tool to split common expenses among group of friends.
- **Tech stack:** Firebase, HTML, CSS, Javascript