

# NIRANJAN GIRHE

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## EDUCATION

### 4<sup>th</sup> Year Bachelor of Technology Computer Engineering MIT Academy of Engineering, Pune, India

- 📅 August 2019 – Ongoing
- CGPA: 9.74 out of 10. (92.53%)
  - JEE mains percentile: 94.55%

## RESEARCH INTERNSHIP

### Game research and development in Serious Games Ontario Tech University, Canada (Mitacs GRI)

- 📅 May 2022 – Aug 2022      Adv: Jeremy Bradbury
- **Tech stack:** Unity, Blender, Krita, C#, Audacity
  - **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 dead-locks 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.

## INTERNSHIP

### Web-based Elective Allocation System MIT Academy of Engineering

- 📅 June 2021 – August 2021      Adv: Mrs. Ranjana Badre
- **Tech stack:** HTML, Javascript, Firebase - Authentication, Firestore database, Materialize CSS
  - **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.
  - **Application:** This portal is being used by our Institute for Minor subject allocation.

### Game Development Salvation Games

- 📅 June 2020 – August 2020      Adv. Mr. Harshit Solanki
- **Tech stack:** Unity, C#, Blender, Krita, Audacity
  - **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.

### RC Aircraft Development MIT Aero club

- 📅 June 2020 – July 2020      Adv. MITAERO club
- **Tech stack:** Fusion, Blender, ANSYS, Betaflight
  - **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.

## CERTIFICATIONS

- 🌟 Microsoft Azure fundamental (AZ 900)
- 🌟 Microsoft Azure AI fundamental (AI 900)

## SKILLS

C++	C#	Java	Python	Android Studio	MySQL
HTML	Unity	Javascript	Blender	Kotlin	AIML
NodeJS	3D Animation	Firebase	MongoDB	Azure	
Git & GitHub	Adobe XD	Unreal	Arduino	Latex	

## ACHIEVEMENTS

- 🏆 **Secured 1<sup>st</sup> rank in HakkerRank Python Challenge**  
For solving 6 CP questions the fastest
- 🏆 **Winner - Smart India Hackathon**  
Built labor complaint registration web portal with advance feature like speech to text in regional language, easy complaint escalation and text summarisation.

## RESEARCH PROJECTS

### Smart Traffic System to optimize the city traffic 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 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

- 📅 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, 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 app to split common expenses within friends
  - **Tech stack:** Firebase, HTML, CSS, Javascript

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