


PRERANA ACHAR

Final Year Bachelor's Student in Information Technology

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 <https://prerana-achar.github.io>

EDUCATION

BTECH IN INFORMATION TECHNOLOGY

- **GRADE: GPA - 9.4/10**

Dwarkadas J. Sanghvi of Engineering (2020 -2024)

ISC BOARD (Grade 12)

- **COMPUTER SCIENCE - 100% (Overall - 96%)**

Chatrabhuj Narsee Monjee School (2018 - 2020)

ICSE BOARD (GRADE 10)

- **COMPUTER APPLICATIONS - 99% (Overall - 94%)**

L.R. and S.M Vissanji Academy (2005 - 2018)

RESEARCH PROJECTS

- **3D Multi-layered Property Aware Draping (Ongoing) (2023)**

Working under the guidance of Professor Chirag Raman from TuDelft University of Technology to generate 3D material, texture and shape aware multilayered clothing from an image prompt for virtual avatars.

- **Text to 3D avatar clothing generation (2022)**

Used BERT's multilabel-multiclass classifier to classify text prompts to generate template meshes for various parts of the body and then predict and apply mesh deformations and tweak parameters (length, texture, height of sleeve, skirt, jacket etc.) to generate 3D clothing from user entered prompts. Enhancing the model to better interpret interpolation among latent spaces instead of discretely classifying them.

[Manuscript publication in progress]

Familiar with the concepts of Encoders, latent spaces, Bayesian Machine Learning, Deep Learning. Comfortable with LaTeX, Overleaf, Zotero, etc.

OTHER PROJECTS

- **Ivory Flame (Complete)** - Engineered a collaborative platform and mini-game builder to teach analytical concepts to students through dynamically adjusted 3D levels and puzzles.
- **Mystic Memoirs (Ongoing)** - Programmed a 3D scene creation tool and multiplayer platform for TTRPGs.
- **CheckScan (Complete)** - Built a Windows Service to scan cheques and perform OCR on it to read and extract data from it.
- **Gravity (Complete)** - Built a Physics puzzle-based game to teach the concepts of gravity and mechanics.

COURSES

- **10-701 CMU, Introduction to Machine Learning (PhD)**

By: Carnegie Mellon University (Ongoing) - Youtube

- **Deep Learning Specialization**

By: DeepLearning.AI (Audit) - Coursera

INTERNSHIPS

JP MORGAN CHASE AND CO.

SOFTWARE INTERN (JUNE 2023 - AUGUST 2023)

- Ongoing

NET TECH SERVICES INDIA PVT LTD

SOFTWARE INTERN (JULY 2022 - AUGUST 2022)

- Learnt .Net Core, Blazor and Springboot. Designed a sample project with RESTful APIs and MySQL Database connectivity. Implemented these concepts to existing projects
- Learnt python and used openCV, YOLOv8 and easyOCR to extract handwritten data from cheques. Designed graphics for ATM screens and cards.

ACHIEVEMENTS

SMART INDIA HACKATHON 2022

- Won first place at the national level (Project: Ivory Flame)

Role: Team Lead, Programmer

Prize Money: Rs. 1,00,000

AVISHKAR RESEARCH CONVENTION

- Designed a system that inspects player patterns by evaluating their performance (time taken, incorrect attempts etc.) and dynamically adjusting game difficulty and storyline, improving performance in traditional tests by 42%
- Qualified for state level convention.

Role: Team Lead, Programmer

- Selected for the position of Software Intern at JP Morgan through Code For Good

SKILLS

- 8+ Years of Coding Experience
- Programming Languages/markup languages - Java, C#, Python, Javascript, R, HTML, C, XML, SASS, SQL, PHP, Go, Kotlin
- Applications Used - Unity, Blender, Android Studio, Autodesk Mudbox, Autodesk Maya
- Proficient with art applications such as Krita, Gimp etc.
- IDEs used - IntelliJ Idea, Eclipse, PyCharm, Visual Studio
- Frameworks Used - HTML, SpringBoot, React, Next.js, ASP.NET MVC
- Databases Used - MongoDB, MySQL

Language/Skills

Java
Java
Android Studio
Python
Python, Blender
C#, Unity, Blender
MERN Stack
Next.js
Unity, C#
XML, C#, MySQL
C#, Unity, MERN

Projects

- Equation Evaluator in BlueJ (2017)
- Turn based chess game (2019)
- Android app to manage recipes (2021)
- OCR on cheques (2021)
- Text to 3D avatar clothing generation (2023)
- Mystic Memoirs (2019 - now)
- TTRPG Character/Combat tracker (2023)
- Website for Ganesh Bank (2022)
- Gravity (2021)
- XML to Database Populator (2020)
- Ivory Flame (2022)

Google Developer Profile

- Google Developer Profile - <https://g.dev/PreranaAchar>