

# ABHISHEK MITRA

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UNIVERSITY OF SOUTHERN CALIFORNIA, SPRING 2023 GRADUATE (MS IN CS - GENERAL)

This is an application towards the position of **JUNIOR GAME DEVELOPER** for **EA Studios**, Austin.

## EDUCATION

**MAY 2021 | UNDERGRADUATE SCHOOL**

**B TECH (COMPUTER SCIENCE)**, IEST | SHIBPUR, HOWRAH, INDIA

**GPA:** 9.05(/10.00)

**MAY 2023 | GRADUATE SCHOOL**

**MS (COMPUTER SCIENCE – GENERAL)**, UNIVERSITY OF SOUTHERN CALIFORNIA | LOS ANGELES

**GPA:** 3.54(/4.00) (up to end of Fall 2022)

**COURSEWORK:**

- Analysis of Algorithms
- Database Systems
- Web Technologies
- Operating Systems
- Foundations of Artificial Intelligence
- Information Retrieval and Web Search Engines
- Game Engine Development

## EXPERIENCE

**07.05.2018 – 07.06.2018**

**INTERN**, CHILD RIGHTS AND YOU (CRY) | KOLKATA, INDIA

Non- technical summer internship, tasked in the first half with managing a fundraiser to be organized at the Indian Museum, Esplanade, Kolkata, and to gather sponsorship and a distinguished guest list for the same. Separately, to interview applicants for and help organize the yearly CRY MUN (Model United Nations). The second part of the internship related to helping educate economically challenged students in designated areas in Kolkata after acquiring accommodations for the same through sponsorship from local authorities.

**11.05.2020 – 03.07.2020**

**INTERN**, MICROSOFT IDC | BENGALURU, INDIA

Software Engineering Intern at Microsoft IDC Bengaluru, worked on ReactJS, AngularJS, GraphQL and Azure, mainly on integrating Speller Suggestions into All Tab of Microsoft Teams, that is, a suggestive autocorrect system on the search results page based on searches from connected Microsoft services like Office, Sharepoint and Teams services.

**01.06.2021 – 04.11.2021**

**INTEGRATION CONSULTANT**, DIGITE INC. | MUMBAI, INDIA (WFH)

Worked on data integration and pipeline building, QA in DevOps, Automated Testing and building an auto-monitored framework for data integration between platforms like Salesforce, SwiftKanban, Jira, Rally, and so on, using technologies like Apache Nifi, Kafka, Spark, MongoDB (Robo3T); JUnit, Cucumber for testing; Jenkins pipelines and various Nifi/Nifi Registry APIs; Vault, Snaplogic and other software. Used Junit, Tekton for Kubernetes (clustered across AWS machines) maintenance scripts, Terraform for AWS setup, Groovy, ECMA and JS/TS to write Nifi scripts to import data between software like Jira, Rally, Azure DevOps, and Google Chat API to send auto-bot messages on status change/failure.

## SKILLS

- Knowledge of data structures and common algorithms and their implementations in C/C++, Java, Python.
- Knowledge of web building (pages, server-side scripting, client-side scripting, cookies, dynamic html5 rendering, flash) using php, html, perl, sql, css, javascript, ajax, asp.net (and the .net framework), js extensions like node.js, ReactJs, AngularJS, Typescript, debugging with DevTools, integration with MongoDB, SQLDB, etc.
- Knowledge of microservices, data exchange and formats between front and back ends and its security for services like call, chat, streaming.
- Creation of trainers, which are semi-automated scripts to modify key memory values in known applications (usually games).
- Work with query automation and auto data sync with Nifi, Kafka, testing with JUnit and Cucumber, pipelining with Snaplogic and Jenkins, auto setup with Terraform, in a Kanban+Scrum environment.
- Using regression models in python (basic dataset fitting) and image processing through the Nvidia Digits engine.
- Using pattern matching Lua scripts in various modding toolkits, Cheat Engine and process monitors.
- Knowledge of supervised and unsupervised learning, classifiers, basic image processing and NLP using models like NN, D-Trees, etc.
- Some work with VC++ or VB in games, meshing on 3DS Max, basic terrain and level design on Unity, and creating animations from image sets, and Raster graphics and Photoshop.
- Wrote code to build Weenix, a toy UNIX based OS, with functional kernel and user shell, capable of process/thread handling, forks, and common shell commands.
- Began working with VR on Unity, on kine-camera point cloud captures to be rendered via Oculus rift 2, and streaming VR kine-cam footage in ply format.

## ACTIVITIES

### Extracurriculars

- Accolades in regional and national debate and essay competitions including Inter Jesuit (2014), Telegraph East (2016).
- Top percentiles in Olympiads organized by various entities like Silverzone, Macmillan University, etc.
- Frequent and contribute to Nexus Mods, which hosts mods for popular PC games, using self-designed or platform-based textures and toolkits.
- Frequently pen down short prose, published in a few magazines, like Kloud9, edited by Ruskin Bond.
- Have meddled in various activities like swimming, playing chess, playing the keyboard, learning music theory, extempore, and so on at various times.

### Hobbies

- Gaming, writing mods for games and reading are the three most frequently pursued hobbies.
- Formatting PC with new Insider builds of Windows and different Linux OSes and checking/giving feedback on new features, playing with Kali Tools like MetaSploit and terminal tweaks.
- Pursuing literature, mythology from various cultures and conspiracy theories and new scientific achievements, and following journals like Mathematical Excalibur.
- Playing the keyboard and trying to listen to and analyze various music.
- Writing various short prose and sometimes observational pieces, and a now inactive blog.
- Other hobbies are short lived and inspiration dependent, for example, meddling with sound engineering with FL Studio and plugins like Melodyne and Autotune, or learning to make visual novels with digital art and renpy, or editing videos with Filmora/Premier Pro.