

SANAD KADU

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EDUCATION

Indiana University

Masters in Computer Science, Graduating in 2024

GPA: 3.78/4.0

UPES

B.Tech in Computer Science & Engineering

GPA: 3.35/4.0

Bloomington, IN, USA

Aug 2022 – Present

Dehradun, UT, India

Aug 2018 – May 2022

Relevant Coursework : Data Structures & Algorithms, Design & Analysis of Algorithms, Programming Language Principles, Proofs as Programs, PL Semantics, Theory of Computing.

TECHNICAL SKILLS

Languages: *multilingual* experienced in Racket, JavaScript, Haskell, Java, comfortable with Agda, C/C++ , Rust, SQL, Python, Clojure, Ruby (in random order).

Software & Tools: \LaTeX , PostgreSQL, Git, HTML/CSS, can adapt to any editors/OSes, I usually use Emacs.

TEACHING

Teaching Assistant

Luddy School of Informatics, Computing, and Engineering, Indiana University

January 2023 – Current

Bloomington, Indiana

- Courses: CSCI-C 311: **Programming Languages Principles**, CSCI-C 241: **Discrete Structures for Computer Science**.
- Demonstrated concepts from weekly lectures, evaluated student expertise, managed the autonomous lab section and held regular discussions to help students understanding of the subject.
- Skills: Functional Programming, Interpreters, Programming Language Theory, Graphs, Discrete Maths.

EXPERIENCE

Software Developer Intern

Freecharge Payment Technologies

January 2022 – April 2022

Gurugram, HR, India

- * Refactored and enhanced transaction fulfillment system microservices reducing its codebase from ~5000 to ~4000 LoC, additionally resulting in fewer billing errors in production.
- * Increased unit test coverage (from ~30% to ~90%).
- * Skills Developed: Backend development in **Java** using **Spring** framework, Unit testing **REST** API's using **JUnit** and **RestAssured**, Using **Git** for version control and working with **JIRA** and **Agile** project management.

Software Developer Intern

Quickwork Technologies

June 2021 – August 2021

Mumbai, MH, India

- * Accountable for development and maintenance of more than 15+ API integration modules.
- * Worked with backend team to create real-time conversational and messaging workflows with human agents, chatbots and IoT devices, across multiple channels such as WhatsApp, Telegram, Slack etc.
- * Skills Developed: Managing backend of a complex web app using **Node.js**, Adding new features and modules to existing codebase.

PROJECTS

nand2tetris | Javascript, Node.js, HDL, Assembly

- * This project is was all about making a general purpose 16-bit computer from scratch using only **NAND** gates.
- * Used HDL to simulate logic gates (from various combinations of **NAND** gate), which were further used to implement the Von Neumann architecture (ALU, CPU, flip-flop based Memory)
- * Furthermore, I used Javascript (Node.js) to create a minimal assembler and virtual machine language translator to computer programs like Tetris & Pong on the 16-bit computer.

rustyletter | Rust, Tokio, actix-web

- * Built a fully functional email newsletter API, starting from scratch.
- * Structured the code to make it modular and extensible
- * Wrote tests, from single units to full-blown integration tests.

Plagiarism Detector | C

- * Built CLI program that takes .txt files and return the percentage of plagiarism in their contents.
- * Individually contributed in effectuating the KMP algorithm.

Craft Share | React, Next.js, Firestore

- * Built a complex web app inspired by sites Dev.to and Medium which supports CRUD operations on blog posts.
- * The platform also supports image uploads, bot friendly content (SEO).