MANISH KUMAR

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Education

- **Indian Institute of Technology, Kanpur** — India
  Bachelor of Technology in Computer Science; ***CPI: 9.01 / 10.0*** — *July. 2015 – June. 2019*
- **Academic Excellence Award** by IIT Kanpur for the year 2017-18.

Work Experience

- **Unistack**, *Lead Software Engineer, ONDC based startup* — Oct'23 - Jan'25
  - **Technical Leadership**: Led the engineering processes for building seller app, shopify adaptor and API specs.
  - **Team Leadership**: Managed technical hiring, mentored engineering team, and established code review processes.
  - **ONDC Integration**: Successfully guided the platform through ONDC's rigorous certification process, achieving production-ready status for the retail category.
  - **Technologies**: Node.js, TypeScript, Keycloak, REST APIs
- **Quadeye India**, *Low Latency Software Developer, HFT* — Jun'19 - Jul'23
  - **Core**: Worked on a latency-critical C++ platform facilitating algorithmic trading for strategies around the globe.
  - **Exchange Integration**: Designed and implemented order flow systems for multiple stock exchanges, including support for Good-Till-Expiry orders. Analyze exchange data and take data-driven decisions.
  - **System Architecture**: Architected real-time margin monitoring systems with automated risk controls for trading strategies, ensuring adherence to position limits.
  - **Risk Management**: Built trading surveillance systems to detect order spoofing and implemented trade sanity checks to ensure compliance with market regulations.
  - **Miscellaneous**: Developed exchange order ID prediction system and automated options expiry PNL adjustments.
- **Amazon India**, *Software Developer Intern, India-Payments Team* — May'18 - Jul'18
  - **Integration Tests**: Implemented and deployed a robust unit and integration test suite for the UPI APIs.
  - **Skills**: Microservice architecture, Debugging, Software Testing, CI/CD, JUnit

Projects

- **Java Compiler**, *Course Project, Prof. Subhajit Roy* — Jan'18 - Apr'18
  - **Description**: In a team of 3, developed a compiler in Python that translates a subset of Java code to x86 assembly.
  - **Features Implemented**: Objects, method overloading, strings, arrays, block scoping, and basic type checking.
- **HTTP Proxy Server**, *Course Project, Prof. Amey Karkare* — Jan'18 - Apr'18
  - **Description**: Built a HTTP proxy server in *Haskell* that could filter access to blacklisted websites.
  - **Concurrent server**: Used multi-threading with MVar semaphores for handling concurrent requests and implemented polling for non-blocking operations.
- **Buffer Vulnerabilities Identifier for C**, *Supervised Project, Prof. Subhajit Roy* — May'17 - Jul'17
  - **Overview**: Developed a VSCode extension to detect and prevent buffer overflow vulnerabilities in *C* programs through static code analysis.
  - **Implementation**: Built a code analyzer using *pycparser* to generate Abstract Syntax Trees (*AST*) and identify and replace memory-unsafe code patterns.

Personal Projects

- Built a focused **search engine** for IIT Kanpur's web domain, indexing academic pages and student profiles using python scrapy web crawler and elastic search technologies. Link - https://tinyurl.com/yaz7lmr2
- Made an application for Code.Fun.Do 2017 that identifies objects in images and provides relevant Wikipedia information.
- Developed a **Chrome extension** that automates LinkedIn profile data extraction and integrates with contact discovery APIs for lead generation.

Programming Skills

- **Languages**: C++, Python, Javascript, Haskell — **Web Technologies**: Node.js, Typescript, MongoDB, MySQL
- **Utilities**: Linux, GDB, Git, Vim, LaTeX, MIPS Assembly Language

Coursework

Concurrent Programming	Operating Systems	Computer Networks	Compiler Design
Computer Systems Security	Database Systems	Functional Programming	Distributed Systems