Manish Kumar

ENGINEERING LEADER · PRODUCT BUILDER

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Summary

A Computer Science and Engineering graduate from IIT Bombay, with more than 18 years of experience in software development. Designed and developed SaaS and desktop products end-to-end. Hired, mentored, led teams to create robust and profitable products from scratch.

Education

IIT Bombay(Indian Institute of Technology Bombay) *Mumbai, India*
B.TECH. IN COMPUTER SCIENCE AND ENGINEERING *Jul. 2000 - Aug. 2004*

Skills

Programming Languages	**Rust**, **Go**, Scala, Python, C++, C#, Swift, TypeScript
Databases	Amazon DynamoDB, Apache Cassandra, MongoDB, PostgreSQL, Redis, Scylla
Software Tools	Akka, Apache Kafka, AWS Lambda, Axum, Docker, Django, GraphQL, gRPC, Play Framework, React, Tonic

Work Experience

Maitch Inc *NJ, USA(Remote)*
HEAD OF ENGINEERING *Oct. 2023 - Present*

- Recommendation System
    - Building a recommendation system intended for application across various e-commerce platforms.
    - Utilizing Rust for high-performance and secure development.

Turing Inc *CA, USA(Remote)*
SOFTWARE ENGINEER *Apr. 2020 - Sep. 2023*

- Supply Chain Product
    - Built a supply chain product to streamline inventory procurement and management for the client's manufacturing plants.
    - Implemented a robust system using Python to enhance the supply chain operations.
    - Leveraged AWS services for scalable and reliable infrastructure.
    - Designed and implemented a GraphQL-based interface for efficient data querying and manipulation.
    - Utilized DynamoDB for secure and efficient data storage.
    - Utilized AWS Lambda for serverless computing.
    - Utilized OpenSearch for efficient data querying.

  The project was a resounding success, contributing to the optimization of the client's manufacturing operations.
- CRM
    - Built a CRM product for lawyer data management in the USA and Canada.
    - Built REST and GraphQL APIs using Python and Django, facilitating integration with multiple platforms.
    - Utilized PostgreSQL and Redis for efficient data storage.
    - Implemented a microservices architecture to gather and analyze data from various sources, including phone and email services.
    - Built the core functionalities of the CRM using Python.

  Successfully deployed and adopted by thousands of lawyers in the USA and Canada.

Setuserv Info. Pvt. Ltd. *Hyderabad, India*
PRINCIPAL SOFTWARE ENGINEER *Aug. 2018 - Mar. 2020*

- Text Analytics System
    - Designed a service architecture for an NLP-based text analytics SaaS product using a microservices approach.
    - Established an end-to-end pipeline infrastructure on AWS, incorporating multi-node Kafka, Cassandra/Scylla, a web crawler, and other critical services.
    - Built a RESTful API to enable end-users to access data, while internal micro-services communicated through gRPC API.
    - Created a user-friendly web portal for visualizing analytics, offering thousands of filters to generate millions of possible combinations.
    - Led and managed a team of six engineers throughout the project.

  Successfully delivered the project, providing a powerful text analytics solution with a user-friendly interface and robust infrastructure.

Ebizon Net Info Pvt. Ltd.   *Noida, India*

CTO/TECHNICAL ARCHITECT   *Jul. 2015 - Jul. 2018*

- PushFlew
  - Built PushFlew, a SaaS product tailored for small and medium-sized enterprises, focusing on customer life-cycle management.
  - Provided push and email notification services for web applications.
  - Implemented public-private key pairs for each registered website, with the public key stored client-side using a JavaScript plugin for service worker registration.
  - Utilized a private key on the backend for secure push notification payload signing.
  - Incorporated features such as automated pushes from RSS feeds and e-commerce-specific activities like cart abandonment and shipping notifications.
  - Employed Scala for various backend functionalities.
  - Utilized PostgreSQL and Redis for efficient data storage.
  - Ensured consistent deployment through containerization.
  - Designed RESTful APIs for seamless integration.
  - Developed a JavaScript plugin for client-side integration.

  Successfully delivered PushFlew, a versatile customer life-cycle management solution for web applications.
- AppifyCart
  - Built AppifyCart, a SaaS product designed for e-commerce companies to build and manage mobile apps for iOS and Android.
  - Streamlined the process of app creation by allowing users to upload basic details and API keys for their e-commerce store.
  - Empowered users to manage app features, including payment gateways and shipping methods, after app deployment to app stores.
  - Utilized Scala for critical backend components.
  - Managed data using PostgreSQL and MongoDB for specific data requirements.
  - Supported both iOS and Android app development.
  - Designed RESTful APIs for seamless integration with e-commerce platforms.

  Successfully delivered AppifyCart, a user-friendly SaaS solution for building and managing mobile apps for e-commerce companies.

Geometric Ltd.   *Pune, India*

TECHNICAL SPECIALIST   *Apr. 2010 - Jul. 2014*

- Simulation of virtual cloths
  - Led a team of five engineers in the development of a cloth simulation engine.
  - Implemented advanced physics and geometry algorithms for realistic virtual cloth simulation.
  - Leveraged GPU computing for efficient and high-performance cloth simulations.
  - Integrated the simulation APIs with a user-friendly interface using WPF (Windows Presentation Foundation) and OpenGL.
  - Established a shared memory system to facilitate seamless data transfer between the CPU, GPU, and visualization components.
  - Utilized C++ for the core development of the cloth simulation engine.

  Successfully delivered a cloth simulation engine that is in active use by clients, enabling realistic virtual cloth simulations for various applications.

PayPal IDC   *Chennai, India*

SOFTWARE ENGINEER   *Oct. 2007 - Mar. 2010*

- Automated risk mitigation payments
  - Built risk mitigation products for PayPal Payments.
  - Implemented a rules-engine for Payment stream and batch processing.
  - Built an address normalization product to verify addresses and reduce risk.
  - Designed batch processing tools to analyze payment and risk data.
  - Presented the analyzed data through a visual dashboard.
  - Utilized C++ and Python for software development.

  The product is actively used in processing millions of USD daily, effectively mitigating risk in PayPal Payments. This employment was through a third-party vendor, CSC India Pvt. Ltd.

Geometric Ltd.   *Pune, India*

SOFTWARE ENGINEER   *Jan. 2005 - Sep. 2007*

- PreClassA Library
  - Built PreClassA Library for automated Class A Surface creation.
  - Implemented an optimization module using Quadratic Programming.
  - Designed a feature for merging multiple Class A surfaces with g2 continuity.
  - Utilized C++ for software development, enabling efficient surface creation and optimization.

  The product is widely used in modern automobile design, streamlining the process of creating Class A surfaces for automotive products.

IIT Bombay   *Mumbai, India*

JUNIOR RESEARCH FELLOW   *Aug. 2004 - Jan. 2005*

- Optimization in CAGD
  - Conducted research in Computer-Aided Geometric Design (CAGD).
  - Achieved successful automation of Class A surface creation.

  Implemented the research findings into software solutions benefiting the automotive industry.