

# Rohit Sen

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## ABOUT ME

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Accomplished and results-driven professional with a demonstrated track record in adeptly managing a compact team of developers while overseeing the development of two significant software products. A highly skilled programmer specialising in backend development, characterised by self-motivation and ability to navigate and excel in challenging assignments and tasks.

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, SQL (Postgres, MySQL), JavaScript, HTML/CSS,

**Frameworks:** Django, Django Rest Framework, Flask, Node.js, FastAPI

**Developer Tools:** Git, Docker, AWS, VS Code, Visual Studio, Azure DevOps

**Libraries:** Pandas, NumPy, Matplotlib

## EXPERIENCE

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### Team Lead

Feb 2022 – Present

*Intech Additive Solutions*

*Bangalore, India*

- Managing a Team of 6 developers
- Ownership of 2 major software products from company software product portfolio
- Liaison with Hardware team for gathering feedback and requirements for software products
- Keeping upto date with the latest advancements in the industry
- Development and improvement of critical modules and Maintenance of Legacy code

### Senior Software Engineer

April 2019 – Jan 2022

*Intech Additive Solutions*

*Bangalore, India*

- Development of Additive Manufacturing Software as a part of Intech Products and Services
- Developed Algorithms for Processing 3D Mesh files ( STL ), Improved Support structure generation performance by 25%
- Developed costing model for L-PBF process with upto 95% accuracy, enabled automatic Quote generation for end customers

### Software Engineer

Feb 2017 – Mar 2019

*Intech Additive Solutions*

*Bangalore, India*

- Developed a system for gathering and accessing Experimental data of all departments of the company
- Developed ML model based on the collected data
- Developed Algorithm for optimising Material processing parameters, achieved up to 60% increase in productivity
- Implemented Genetic Algorithm based optimisation, improved prediction accuracy by 80%

## PROJECTS

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### AMOptoMet | *Python, C++, C#*

- Designed and developed Backend data handling module with Encryption for User data
- Demonstrated the Software tool at FORMNEXT-2018 in Frankfurt, additive manufacturing conference
- Migrated the codebase from svn to git
- Implemented License management and tracking
- collaborated with the Frontend team for development of the UI

### AMBuilder | *C++, Computational Geometry*

- Developed algorithm for Geometry slicing using VTK library, tolerant to Mesh errors
- Benchmarked performance of HalfEdge based geometry slicing Algo with VTK slicing algo
- Implemented Octree like Data structure, Improved efficiency of Support Structure generation by 40%

### AMExplore | *Python, AWS, FastAPI, Docker*

- Implemented logic for computing properties from 3D geometry
- Reduced computing time by 60% using numba for critical functions%
- Developed algo for computing internal and External complexities of a 3D geometry
- Converted applicaiton to a webservice using Docker and FasAPI
- Deployed the docker container to an ondemand EC2 instance

## PERSONAL PROJECTS

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**ConfirmDoc** | *Python, Django, Vue, Git* | [website](#)

May 2022 – Present

*SaaS application for Verifying Identity, Criminal history and Credit for leasing/buying real estate*

- Developed web application using Django, Postgres for backend and Vue.js for frontend
- Developed custom user models and Middleware
- Integration of *PLAID*, *CRS* APIs within the application
- Celery and Redis for asynchronous tasks and caching
- Deployed on AWS EC2 using Docker Compose
- Implemented Nginx reverse proxy
- SSL using letsencrypt and certbot

**MassIdeation** | *Python, Django, Vue, Git* | [website](#)

Mar 2022 – Jun 2022

*Simulator for crypto trading to evaluate different strategies*

- Developed web application using Django, Postgres for backend and Vue.js for frontend
- Used *Binance* APIs for crypto currency price data
- Implemented MACD based trading strategy
- Integration with Charting library for visualization
- Implemented Nginx reverse proxy
- SSL using letsencrypt and certbot

**AudioChain** | *Python, FastAPI, Qdrant:VecDB* | [website](#)

May 2023 – Sep 2023

*Audio Blockchain for new age creators*

- Developed ML algorithm to detect duplicates of songs/audio present in library before minting NFT of the same
- Extract vector embeddings from Songs and audio files
- Storing the embeddings in Qdrant vector DB
- semantic search for detecting possible piracy / plagerism

## INTERESTS AND UPSKILING

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- Pursuing Masters in Datascience, Deakin University (online)
- Learning about LLMs and advancements in opensource generative AI
- Exploring Use cases of LLMs and Generative AI in Additive Manufacturing