Tanmay Agarwal

Full Stack Developer | ML Developer | Python Engineer

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Columbia University

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EDUCATION

Columbia University *New York, NY*
MS in Computer Science Expected Dec 2026

Vellore Institute of Technology *Vellore, India*
B-Tech in CSE with specialization in Data Science, CGPA: 8.7/10.0 2021 - 2025

EXPERIENCE

Suryaa Chamball Power Limited *Jan 2025 - Present*
Data Analyst Kota, India
− Engineered a data analysis framework, reducing manual processing time by 40% and improved data accuracy 25%
− Training of ML algorithms to build predictive models for power loss estimation, increasing accuracy by 15%
− Architected real-time Power BI dashboards, enabling stakeholders to identify anomalies and make data-driven decisions, resulting in a 12% reduction in operational costs while documenting results

Pro-Start-Me Technologies Private Limited *Aug 2023 - Sep 2023*
SEO and Generative AI Intern Surat, India
− Developed an automated reporting tool (using Python and AI techniques), decreasing reporting time by 54%
− Conducted detailed competitor analysis across 8 industry verticals, identifying 15+ optimization opportunities
− Optimized meta titles and details across 15+ websites, yielding a 30% increase in organic search click-through rates

PROJECTS

3D Portfolio Website **tanmayresume.com**
− Architected a 100% interactive 3D website, boosting user engagement by 30% through immersive UX and UI planning.
− Engineered a high-performance app using React, Three.js, Node.js, Express, and Email.js.
− Achieved a 98% Lighthouse performance score, ensuring speed and responsiveness.

Problem-Solving Projects **GitHub Link**
− Built a suite of 12+ automation and utility tools to solve real-world productivity problems using Python, JavaScript, and AI APIs.
− Reduced manual outreach time by 95% via tools like LinkedIn Message Personalizer and WhatsApp Bulk Messenger, leveraging AI/LLM-based text generation, DOM scraping, and bulk message delivery systems to handle up to 1,000+ users per run.
− Engineered modular utilities including an AI-powered Cover Letter Generator, SMS-based Expense Tracker, and Chrome History Analyzer with a focus on data parsing, JSON structuring, API integration, and CLI dashboards.

SKILLS

Programming Languages: Python, C/C++, JavaScript, HTML, CSS, Java, SQL, R

Tools and Frameworks: React, Node.js, Express.js, MongoDB, Git, Vite, Jupyter Notebook, Power BI, Three.js

AI/ML and Data Science: Machine Learning, Data Analysis, Natural Language Processing (NLP), Generative AI, GPT, Claude, Model Deployment, Data Visualization, Prompt Engineering, Model Evaluation & Tuning

Soft Skills: Problem Solving, Leadership, Project & Time Management, Effective Communication, Adaptability, Collaboration

PUBLICATIONS

Designing Energy Aware Scheduling and Task Allocation Algorithms for Online Reinforcement Learning Applications in Cloud Environments: IEEE Transactions on Computational Social Systems DOI:10.1109/TCSS.2024.3508089

LEADERSHIP EXPERIENCE

Technical Project Head, SCRS Chapter, VIT Vellore *Apr 2023 - Jan 2025*
Event Coordinator, Blockchain, VIT Vellore *Mar 2023 - Apr 2023*
Core Member, Google Developer Student Clubs, VIT Vellore *Jan 2023 - Apr 2023*

ACHIEVEMENTS

Freelancing, Completed 4 web development projects for clients *2024*
Competitive Coding, Solved 600+ problems on CodeChef and 250+ problems on LeetCode *2023*
SIH Hackathon, Advanced to National level in Smart India Hackathon *2023*
State Level Player, Represented in state-level Chess and Tennis competitions *2018*
International Olympiads, 20+ Awards in International Olympiads *2008-2020*