

Contact

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(LinkedIn)

Top Skills

JavaScript

Angular

Product Development

Languages

French (Limited Working)

English (Full Professional)

Hindi (Full Professional)

Certifications

The Complete Python Bootcamp
From Zero to Hero in Python

AMCAT Certified Data Processing
Specialist

Ethics in the Age of Generative AI

Streamlining Your Work with
Microsoft Bing Chat

Generative AI: The Evolution of
Thoughtful Online Search

Gaurav Surtani

Software Developer (AI/ML) @Bexorg | Ex-NASA | SDE | ML | AI |
NLP | Graphs

San Jose, California, United States

Summary

I'm a hands-on, results-driven Full Stack Engineer who thrives on building software from scratch and transforming ambitious ideas into impactful products. With over 6 years of experience, I've led projects from concept to deployment, delivering scalable solutions to complex challenges.

Currently, I'm deepening my expertise by pursuing a Master's degree in Artificial Intelligence to further explore the transformative power of AI and ML. My journey spans full-stack development, data science, and cloud technologies, where I've led projects that integrate cutting-edge web applications with machine learning models for real-time insights. I excel in creating intuitive, user-focused platforms, optimizing systems, and leading cross-functional teams to deliver projects on time.

I'm passionate about leveraging AI to solve real-world problems and drive innovation. Whether it's optimizing operations, enhancing user experiences, or scaling data-driven solutions, I'm always ready to take on new challenges. My current interests include GenAI, LLM Agents (using LangChain), and ML applications in healthcare, finance, geospatial urban planning, and recommendation systems.

If you're looking for someone who can take projects from zero to product, and is constantly exploring new technologies to create value —let's connect!

Key Skills: Full Stack Development, Python, JavaScript, React, Machine Learning, Graphs, GenAI, LLM Agents (LangChain), Data Science, Cloud Technologies (AWS, GCP), Neo4j, Geospatial Analysis, Recommendation Systems, Financial Modeling, Healthcare Analytics.

Best way to reach me: gaurav.surtani.tech@gmail.com

Experience

Bexorg, Inc.

Full Stack Engineer Intern

May 2024 - May 2025 (1 year 1 month)

New Haven, Connecticut, United States

- Developed a centralized platform for engineers and molecular scientists to access and analyze critical data, improving cross-functional collaboration.
- Integrated graph algorithms to optimize data retrieval and analysis, enhancing user experience and reducing data access time.
- Managed full-stack development using React, Python Flask, and Neo4j, deploying the platform on GCP with CI/CD pipelines (Cloud Run, Cloud Build).
- Implemented identity and access management across multiple user roles, ensuring secure and efficient operations for 40-50 users.
- Focused on outlier detection in time series data using machine learning techniques, improving data accuracy and decision-making.
- Earned Neo4j certifications in graph DB fundamentals and advanced topics, leveraging skills to manage and analyze complex data structures.

NASA Ames Research Center

Machine Learning Developer

December 2023 - March 2024 (4 months)

Mountain View, California, United States

- Performed Geospatial Analysis of flight path's adherence to ATC procedures using Pyproj, Xmltree and Leaflet.js
- Utilized Folium, Pyproj, GeoPandas for geospatial data visualization, simplified complex airspace ArcGIS information.
- Identified navigational challenges within standard flight paths, lead to cost savings in aviation fuel.
- Showcased results on a map container, utilized Next and visualization tools like Plotly (Dash), Seaborn, Matplotlib.

San Jose State University

Research Assistant

July 2023 - February 2024 (8 months)

San Jose, California, United States

- Focused on the development of user interfaces using React, Tailwind CSS, SASS, deploying platforms Netlify & Vercel.

- Managed content with Wix CMS and Strapi CMS to showcase static pages effectively.
- Engaged in Natural Language Processing tasks utilizing Langchain and HuggingFace's transformers.
- Contributed to the development of a multilingual translation system translating from one language to 25 others.
- Utilizing Google Cloud App Engine, Firestore, Cloud Engine and Docker to deploy a scalable web application.

Geo-Spatial Research:

- Utilized GeoPandas for geospatial data processing and analysis, enhancing map-based insights and decision-making.
- Utilized R's dplyr, ggplot2, and stats packages for comprehensive Exploratory Data Analysis (EDA), executing hypothesis testing, and determining covariance and correlation, to uncover key insights.
- Applied advanced statistical and machine learning models to interpret complex geospatial datasets, revealing key patterns and trends.
- Parsed XML data sources for seamless integration with geospatial datasets, optimizing data accuracy and utility in spatial analysis using lxml and BeautifulSoup.

Motion Planning - Research: Perception and Sensor Fusion Focus

- This project applies homogenous transformations to the KITTI dataset for effective sensor fusion between Camera and LiDAR data, enhancing the perception of dynamic environments.
- Advanced normalization techniques are employed to filter out non-critical data, such as roads and skylines, to focus on dynamic objects like vehicles.
- The integration of YOLO v8 object detection with LiDAR data provides precise vehicular bounding boxes, enriching the camera's visual frames with spatial accuracy.
- The final output is a sophisticated fusion of camera imagery, LiDAR measurements, and object detection data, culminating in a multi-dimensional representation for improved motion planning.

Ascendion

Senior Software Engineer

November 2022 - August 2023 (10 months)

Basking Ridge, New Jersey, United States

Technology Used:

Angular, JavaScript, HTML, CSS, UI/UX Design, WebXR, AI, Agile Development, Angular Material, AG-grids, Chart.js, D3.js, Highcharts, Cross-Platform Development, Cookie Services, Data Visualization, Leadership, Team Management, Project Management, Accessibility Standards, Responsive Design, User Interface, User Experience, Web Technologies, Version Control (Git), Agile Methodologies.

- Architectural Leadership: Acted as the initial decision-maker for project architectures, defining timelines and data requirements for website functionality.
- Mentorship and Code Reviews: Mentored a team of 20 engineers and conducted over 500 code review sessions to maintain high-quality code standards.
- Complex Problem Solving: Addressed limitations in existing frameworks (Angular Material, D3.js, Highcharts, Charts.js, AG-grid) by collaborating with developers to resolve accessibility issues.
- Performance Optimization: Significantly reduced page load times from 23 seconds to 2.5-3.5 seconds through UI improvements and pagination implementation.
- Technical Documentation: Maintained comprehensive documentation detailing impacted functions and nodes during Angular version upgrades to ensure seamless transitions for developers.
- Integration and Collaboration: Led a project integrating OpenAI's ChatGPT into Visual Code Studio Extension, enhancing code quality and efficiency. Managed multiple branches across Git platforms and created informative web pages for end users.
- Project Planning and Compliance: Actively participated in scrum and project planning calls, ensuring timely execution of multiple front-end projects. Maintained website accessibility and security standards in compliance with W3C.
- Innovation and Technology Integration: Stayed updated with latest technologies, utilizing ES6 and Angular 16 hooks. Explored emerging

technologies like Extended Reality (WebXR), Unity Engine, C#, and Unreal Engine for potential integration.

Collabera Inc.

Software Engineer

December 2021 - December 2022 (1 year 1 month)

Basking Ridge, New Jersey, United States

Skills:

Angular, React, JavaScript/TypeScript, HTML, CSS/SCSS/SASS , UI/UX Design, WebXR, AI, Agile Development, Angular Material, AG-grids, Chart.js, D3.js, Highcharts, Cross-Platform Development, Cookie Services, Data Visualization, Leadership, Team Management, Project Management, Accessibility Standards, Responsive Design, User Interface, User Experience, Web Technologies, Version Control (Git), Agile Methodologies.

Highlights:

- Engineered cross-platform applications with cookie services for enhanced user experience and data accessibility.
- Spearheaded the creation of intricate dashboards using Angular Material, AG-grids, Chart.js, D3.js, and Highcharts, significantly improving data visualization.
- Achieved a 75% increase in information transfer efficiency to upper management, streamlining communication channels.
- Developed an Angular Framework-driven assessment tool for Site Reliability & DevOps, demonstrating proficiency in emerging technologies.
- Built a web application for Azure Backend demonstrating integrated machine-learning workflows.
- Orchestrated the deployment of an intelligent cloud economics User Interface.
- Engineered a comprehensive Angular component library adhering to W3C's Accessibility standards, enhancing user-friendliness.

- Recognized with the Employee of the Quarter Award and praised for multitasking abilities across projects.
- Received positive feedback for meticulous attention to detail, successfully replicating design systems.
- Demonstrated a strong sense of responsibility by consistently meeting project deadlines and ensuring overall delivery.
- Led two major version upgrades in Angular, from AngularJS to Angular 13, and Angular 9 to Angular 16, providing documentation for seamless transitions.
- Actively engaged in WebXR applications and participated in AI hackathons, emphasizing continuous learning and collaboration.

LIBS

Software Developer

January 2021 - November 2021 (11 months)

Cotonou, Littoral, Benin

- Orchestrated the integration of a cloud-based Sales system, automating inventory reporting processes for seamless operations.
- Engineered an intuitive user interface, enriched with dynamic charts and graphs utilizing popular React libraries such as Chart.js, Recharts, and Victory Charts. This optimization streamlined stock and production reporting, providing comprehensive insights into operational efficiency.
- Spearheaded the production team, ensuring precision and timeliness in deliveries while fostering a culture of operational excellence.

Accenture

Software Engineer

October 2018 - December 2020 (2 years 3 months)

Pune, Maharashtra, India

- Resolved critical system test and validation problems for faster execution of daily batch jobs, troubleshooting various ETL-related jobs/schedules using Informatica and Abinitio in data warehousing.

- Constructed automation scripts in Unix & MS-VBA to provide a comprehensive historical analysis of system processes & resources.
- Investigated data on production batch to understand trends, forecast changes, build more effective models, boosting system readiness 3 months prior to data switchover.
- Utilized workflow scheduler to seamlessly connect to a Unix-based system, orchestrating the execution of batch jobs with precision and efficiency.
- Developed automation scripts using MS VBA and Python to automate the generation of daily reports, enhancing operational efficiency and accuracy.

Enthralltech Private Limited

Frontend Developer

May 2018 - October 2018 (6 months)

Pune Area, India

Angular/MongoDB/Chatbot Research Developer in the R&D team

- Managed a Big Data frameworks MongoDB/Angular/.NET framework on an e-learning platform
- Managed IAM systems, dashboards, gamification learning modules via items stored in AWS warehouses.
- Delved into an experimental chatbot system powered by NoSQL, reducing manual intervention for easy tasks.

Education

San Jose State University

Master's degree, Artificial Intelligence · (August 2023 - May 2025)

Sinhgad Academy Of Engineering

Bachelor of Engineering - BE, Information Technology · (2014 - 2018)