

Shreedhar Savant **TODKAR**

R&D Technical Project Leader | PhD in AI & signal processing

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Currently, in position as R&D Technical Project Leader and AI Engineer with a strong background in AI for Autonomous Driving projects at Capgemini Engineering. Academic journey includes a PhD in Signal Processing, Geophysics, and Machine Learning, reflecting my expertise in data-driven technologies. With over 6 years of expertise in MATLAB and Python, along with 3 years in C++. Passionate in using AI and data engineering to drive innovation. Specialized in developing AI solutions and have a keen interest in Autonomous Vehicles and/or Health and Medicine.

SKILLS

Expertise domains	Deep Learning, Signal Processing, Statistical Analysis and Data science, Geophysics, Supply Chain Management, Project Management
Development platforms	Python, Matlab, Perl, C++
Development/AI platforms	Python (Keras, Tensorflow, Numpy, Scikit, Pandas) and Matlab (Computer vision & image processing, ML & classifier learning, OpenCV)
Project Management	Resource Planning and Scheduling, Google Analytics, MS SharePoint, Jira and Trello
Version Control/Code Collaboration	Gitlab, Github, Bitbucket
OS platforms	Windows, Linux and MacOS
Safety standards	ISO 26262, ISO/PAS 21448 SOTIF

PROFESSIONAL EXPERIENCE

August 2022 present	Technical Project Leader Data and AI Engineer, CAPGEMINI - ALTRAN PROTOTYPE AUTOMOBILES, Meudon, France Technical Responsibilities : <ul style="list-style-type: none">➤ Development of Deep Learning and YOLO models for autonomous driving applications : perception, distance estimation, object detection and tracking.➤ Development of explainable AI models to "explain" and improve autonomous driving experience➤ Development of object detection & tracking methods (e.g. cars, pedestrians, cyclists etc.)➤ RADAR and monocular camera data processing for environmental perception.➤ Development of diagnostic methods to detect sensor faults and failures in the Ego vehicle➤ Development of a reference model for perfect autonomous driving behavior using NLP on the French Traffic Rulebook & SOTIF safety regulations➤ Characterization of the smart testing acceptance criteria through a set of rule-based models Managerial Responsibilities : <ul style="list-style-type: none">➤ Technical-economic benchmark, Return On Investment (ROI)/cost estimation, Business plan writing, Team staffing, Resource identification➤ Project milestones planning and identification of its future technical directions <div><div>Natural Language Processing</div><div>Deep learning</div><div>YOLO</div><div>tracking</div><div>RADAR</div><div>Semantic analysis</div><div>Autonomous Driving</div><div>Defect detection</div><div>Diagnostics</div><div>ISO - SOTIF</div><div>Python</div><div>Gitlab</div></div>
March 2023 April 2023	Interim visiting Associate Professor, ECOLE DE MANAGEMENT LÉONARD DE VINCI, Paris, France Teaching Responsibilities : <ul style="list-style-type: none">➤ Enhanced student engagement through interactive lessons on AI in supply chain➤ Developed and delivered engaging lesson plans to a diverse classroom of 15+ students, resulting in upto 9% increase in standardized test scores on the following topics :<ul style="list-style-type: none">➤ Implementation of AI algorithms in Supply chain➤ Optimization of supply channels and resource allocations using AI➤ Development of platforms using Python <div><div>Artificial intelligence</div><div>Supply chain</div><div>optimization</div><div>resource allocation</div><div>Python</div></div>
September 2021 June 2022	Data scientist and AI consultant for geophysical applications, FREELANCER, Nantes, France <ul style="list-style-type: none">➤ Freelancing Data scientist and AI consultant for NDT applications➤ Data processing consultant for ground radar and non-invasive evaluation➤ Development of deep learning GUI for pavement monitoring end-users➤ Infrastructure data processing for predictive damage detection and control <div><div>Signal processing</div><div>Machine learning</div><div>NDT&E</div><div>SHM</div><div>GPR</div><div>MATLAB</div><div>Python</div></div>

July 2021 November 2019	Postdoctoral Research Engineer, UNIVERSITÉ GUSTAVE EIFFEL, Nantes, France Title : <i>Advanced GPR data processing techniques for thin debonding detection in pavement structures</i> <ul style="list-style-type: none"> ➤ Joint collaborative project with CNAM and Cerema funded by the "Agence Nationale de la Recherche (ANR)", France ➤ Responsible for two work packages related to : Development of advanced data processing and AI techniques for subsurface damage detection and monitoring ➤ Developed an end-to-end HMI (currently deployed on the internal server of Université Gustave Eiffel) <div> Signal processing Machine learning NDT&E SHM debondings GPR MATLAB Python Simulation & modeling </div>
October 2019 November 2016	Doctoral candidate, CEREMA - IFSTTAR, Nantes, France <ul style="list-style-type: none"> ➤ Non-destructive evaluation and monitoring of infrastructures for early detection of structural damage ➤ Development and optimization of artificial intelligence methods (based on supervised machine learning) ➤ Generation of mathematical and numerical synthetic 2D and 3D models for validation of AI detection models <div> Signal processing Machine learning NDT&E GPR debondings MATLAB Simulation & modeling </div>
August 2014 February 2013	Software Engineer & Analyst, ACCENTURE SERVICES PVT. LTD., India <i>Developer - Project Aristos IVR for AT&T</i> <ul style="list-style-type: none"> ➤ Development of an Interactive Voice Response (IVR) system ➤ Data collected and used : Voice calls from 3 South-eastern US states ➤ Design and development of Gandalf : a server monitoring system <div> Interactive voice response system Periphonics Server monitoring Perl Python </div>

EDUCATIONAL BACKGROUND

- 2019 Ph.D. in AI, geophysics and signal processing from Université de Nantes, Nantes FRANCE | **Thesis title :** *Monitoring subsurface conditions of pavement structures using Ultra-wideband radar technology*
- 2016 Masters in Electronics, Specialized in Wireless Communications from École Supérieure d'Ingénieurs en Électrotechnique et Électronique - ESIEE, Paris, FRANCE
- 2012 Bachelors' degree in Engineering, Specialization Telecommunications, from Visvesvaraya Technological University, Belgaum, INDIA

LANGUAGES

English	● ● ● ● ●
French	● ● ● ● ○
Spanish	● ● ○ ○ ○
German	● ○ ○ ○ ○
Hindi, Marathi, Kannada, Telugu	● ● ● ● ●

STRENGTHS

- Passionate and Motivated
- Autonomy
- Resource planning, Quality Assurance
- Mentoring and Coaching

REFERENCES

BERTAU, Thierry

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