

# SHUBHAM PANDEY

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## PROFILE

As a dedicated and results-driven AI professional, I bring over **7 years** of diverse experience, working on multiple projects in **multiple countries**. With a **Master's degree in Artificial Intelligence from Trinity College Dublin, Ireland**, I have consistently demonstrated the ability to lead successful AI initiatives and collaborate effectively in team environments. My expertise spans a wide spectrum of AI domains, including **Generative AI, Deep Learning, Computer Vision, Machine Learning, AR/VR, and Software Development**. I have demonstrated a consistent track record of rapidly translating conceptual ideas into initial **Proof of Concepts (POCs)** and efficiently progressing to the development of **Minimum Viable Products (MVPs)** and ultimately, fully functional production-level AI applications.

## SKILLS

**Soft Skills:** Project Management, Leadership, Problem Solving, Team Building, Presentation and Communication.

**Languages:** Python, C# (Unity3D), JS(React Js), Java.

**AI:** Computer Vision, Machine Learning, Deep learning, NLP, LLM.

**AR/VR:** Marker-based AR, Marker-less AR, SLAM, Feature Detection, AR Kit, Vuforia, Mobile and Web Based AR.

**Framework:** OpenCV, Langchain, Tensorflow (python, Js, TFLite), Scikit-Learn, OpenCV, NumPy, Keras, Pandas etc.

## PROFESSIONAL EXPERIENCE

### HEAD OF AI, AGILIS AS , OSLO, NORWAY

2021 – PRESENT

As the Head of Artificial Intelligence at Agilis AS, a prominent service-based company in Norway, I am **leading and managing the Research and Development (R&D) center for advanced AI development in India**. In this role, I oversee the development of cutting-edge AI solutions, my main responsibilities includes:

- Oversee project planning, execution and delivery, ensuring that projects are completed on time with high quality.
- **Utilized agile and scrum methodologies** to keep projects on track and ensure continuous improvement.
- **Performing client interaction**, quality check, code reviews, requirement analysis and feasibility analysis.
- **Presenting AI initiatives and results** to executive leadership and board members.
- **Designed and implemented robust AI software architectures** for complex projects, ensuring scalability, maintainability, and high performance.
- Orchestrated **full-cycle AI/ML development, custom-tailored to meet client specifications**, encompassing the entire journey from conceptualization to production.
- Proficient in deploying AI solutions across different platforms including **mobile apps and web applications**, facilitating real-time processing.
- Development of **CI/CD pipeline using Jenkins and Bitbucket** resulted in fast development, QA and deployment.
- Mentored and coached team members, fostering a culture of continuous learning and professional development.
- Continuously **evaluated emerging AI architectural trends and integrated them into projects**, driving innovation and staying ahead of the technology curve.

Led the AI department of Naardic AS (**Norway's largest online interactive gym company**), heading the tech development that resulted in a tech solution **far more advanced than competitors**. Some notable achievements include:

- Devising and executing the AI strategy to **gamify fitness and workouts**, culminating in the creation of an **advanced video conferencing system** with **computer vision** at its core. This system effectively replaced traditional solutions like Zoom, resulting in a **2X increase in customer acquisition and retention** due to enhanced features and experiences.
- Pioneering the **deep learning based repetition counter** system and **AR based rep-counter within the video conferencing system**, using **Mediapipe, blazepose, pose estimation and customer trainer DNN model trainer** on

a **large custom dataset**. This innovation introduced real-time competition among customers through leaderboards and real time AI generated feedback.

- Innovating one of the industry's first **avatar systems to mimic customers' full-body movements in real time within the video conferencing system**, offering personalization and customization options.
- Leading the **development of a video processing unit** designed to seamlessly record and enhance videos by overlaying customized text, image and critical information. This pioneering effort has resulted in the creation of a video library, significantly **reducing the operational costs by replacing the real trainers with recorded classes**.
- Leading the development of a **recommendation system of fitness classes** from the coming week schedule.
- Creating a **3D virtual companion** that offers real-time conversational interactions. This project involved utilizing technologies such as **Unity3D, RVC, Reallusion CC4, Langchain, and GPT etc**. This intricate project incorporated **voice cloning, 3D avatar animation, MongoDB, fine-tuning of LLM, prompt engineering etc**.

#### **SENIOR SOFTWARE ENGINEER - ML, CREATEBYTES, GURUGRAM, INDIA**

**2021 – 2021**

As a Team Lead and Senior Software Engineer within the Research and Development Team, I played a pivotal role in overseeing concurrent product development efforts. My contributions encompassed:

- Pioneering the development of a **captcha prediction system** capable of automatically deciphering captchas.
- Architecting an advanced **anatomical part prediction model** specifically tailored for femur bone.
- Work on an **anthropometric parameter prediction system** using the point cloud of a human body.

#### **VISION ENGINEER, SUREWASH, DUBLIN, IRELAND**

**2019 – 2020**

Leading the **training, development, and deployment** of Vision Systems for **kiosk systems and mobile applications**.

- **Collaborating on a vision-based research project** with professors from Trinity College and Enterprise Ireland.
- Utilizing **Azure Kinect Camera** for **body tracking and pose estimation** to create an MVP for a new product.
- Successfully completing multiple projects related to **object detection, classification, and segmentation** using DL approach (**MobileNet SSD, MobileNet, Faster RCNN, YOLO, TensorFlow Lite etc.**) and classical vision and machine learning techniques (**feature extraction, SVM etc.**)
- Proficiency in **data collection, annotation, preprocessing, and augmentation** of large image datasets.
- Experience in working with **Intel RealSense Depth Cameras, depth values and classical computer vision**.

#### **SYSTEM ENGINEER, TATA CONSULTANCY SERVICES, BENGALURU, INDIA**

**2015 - 2018**

- As a **Team Lead** performed client interaction, quality check, code reviews, requirement and feasibility analysis.
- As a **Senior Java developer** having experience in the development and automation of large-scale applications.

### **EDUCATION**

#### **M.S. IN COMPUTER SCIENCE – INTELLIGENT SYSTEMS**

**SEPTEMBER 2018 - SEPTEMBER 2019**

**TRINITY COLLEGE DUBLIN, DUBLIN IRELAND**

**Grade:** First Class 69%

**Dissertation:** User Experience enhancement using three different forms of Augmented Reality namely **Marker-based AR, Marker-less AR, Object Detection-based AR**, implemented using AR Kit, Vuforia, and Unity3D.

#### **BACHELOR OF ENGINEERING - COMPUTER SCIENCE AND ENGINEERING**

**AUGUST 2011 – AUGUST 2015**

**SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU, INDIA**

**Grade:** First Class 67.02%

### **CERTIFICATIONS & ACHIEVEMENTS**

- Based on my performance, I was **showcased on Agilis AS, Createbytes, Surewash company's website**.
- Received **"Start Team", "Best Team" and "On the Spot"** award for distinguished performance.
- Completed **Deep Learning Specialization, Generative AI Specialization** etc. from **Deeplearning.ai, Google** etc
- Achieved Grade B in **Data Analytics** and **Data Mining** Course under CCE program from **India Institute of Science**.