

Savija Pasandul

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PERSONAL STATEMENT

Motivated mechanical engineering graduate with experience in CAD design, and data-driven engineering solutions. Skilled in mechanical design, Python programming, signal processing, and automation systems.

EDUCATION

BEng Mechanical Engineering [2.1 Honours]	2025
Nottingham Trent University, United Kingdom	
Cambridge International AS & A Levels (Mathematics, Chemistry, Physics) [3 A*s]	2021
British Council, Sri Lanka	

WORK EXPERIENCE

Receptionist	09/2025 to Current
GEM Hotels Ltd, UK	
<ul style="list-style-type: none">Provided front-desk support, guest services, and administrative coordination in a high-traffic hotel environmentManaged customer enquiries, bookings, and daily operations ensuring efficient service delivery	
Engineering Research Opportunity Scholarship (EROS)	
Nottingham Trent University, UK	
<ul style="list-style-type: none">Developed AI-based non-contact respiratory monitoring system using YOLOv11 and 2D pose estimationApplied signal processing techniques (Butterworth, Kalman, EMA, Savitzky-Golay filters) for breathing signal extractionCalibrated system using spirometer data to improve measurement accuracy	
Student & Events Ambassador	June 2023 - September 2024
Nottingham Trent University, UK	
<ul style="list-style-type: none">Coordinated student engagement events and supported university outreach activitiesImproved communication, organisation, and event management skills	
Engineering Research Opportunity Scholarship (EROS)	
Nottingham Trent University	
<ul style="list-style-type: none">Conducted research on bionic leg optimization using real-time gait data.Utilized ROS Noetic, Gazebo, Xsens, and Response Surface Methodology to optimize control parameters, reducing oscillations and improving step consistency through statistical modeling.	
Student Mentor	September 2023 - May 2024
Nottingham Trent University, UK	
<ul style="list-style-type: none">Supported students through academic and personal development workshopsStrengthened leadership, mentoring, and communication skills	
Data Analyst Intern	April 2022 - August 2022
KPMG Sri Lanka, Colombo	
<ul style="list-style-type: none">Performed data analysis and visualisation using RDelivered insights through reports and presentations for business decision-making	

KEY PROJECTS

AI-Powered Real Estate Automation System

Technologies: n8n, Airtable, OpenRouter AI, ElevenLabs, API Integrations, Conversational AI

- Built an AI-driven workflow to automate property enquiries, lead management, AI-powered property matching, voice interactions, and agent notifications, improving operational efficiency through intelligent automation.

AI Customer Feedback Classification & Routing System

Technologies: n8n, OpenRouter AI, Google Sheets, Gmail, API Integrations

- Developed an AI-powered workflow to automatically classify customer feedback and route notifications to the appropriate department using AI-driven text analysis and workflow automation.

Engineering Research Opportunity Scholarship (EROS) 2025 - AI-Powered Respiratory Monitoring System

Technologies: Python, YOLO11, OpenCV, Signal Processing, Computer Vision, Biomedical Engineering, AI

- ❑ Designed a non-contact respiratory monitoring system using computer vision and pose estimation
- ❑ Implemented signal processing pipelines (median filtering, EMA, Butterworth, Kalman, Savitzky-Golay) to extract breathing patterns
- ❑ Calibrated model outputs using spirometer data for improved physiological accuracy
- ❑ Developed prototype for potential telemedicine and early respiratory distress detection

Bionic Leg Optimization Using Real-Time Gait Data

Technologies: ROS Noetic, Gazebo, Xsens, Response Surface Methodology

- ❑ Optimised bionic leg control parameters using real-time gait feedback
- ❑ Reduced oscillations and improved motion stability using statistical modelling (Response Surface Methodology)
- ❑ Improved step consistency and system performance through iterative simulation testing

TOP SKILLS

❑ Mechanical Engineering

CAD (Fusion 360)
Mechanical Design
Tolerance Analysis
Materials Science
Manufacturing Processes
Fluid Mechanics

❑ Programming & AI

Python
Computer Vision (OpenCV,
YOLOv11)
Signal Processing
Machine Learning (basic)
Linux
Git / GitHub

❑ Robotics & Automation

ROS Noetic
Gazebo Simulation
Arduino
n8n Automation Workflows

CERTIFICATIONS

- ❑ Udemy - AI Automation Specialist Course. Skills: AI Automation, Automation Systems
- ❑ Jobescapes - AI Automation Specialist Course. Skills: AI Automation, Intelligent Workflows
- ❑ UK Civil Aviation Authority - Flying Drones and Model Aircraft (Flyer ID). Skills: Drone Piloting
- ❑ LinkedIn Learning - Master Your Python Skills. Skills: Python
- ❑ Udemy - The Complete Android & Java Developer Course (Build 21 Apps). Skills: Java, Android Studio
- ❑ LinkedIn Learning - Fusion 360 Essential Training. Skills: Autodesk Fusion 360, CAD
- ❑ LinkedIn Learning - Become an Arduino Developer. Skills: Arduino, C Programming
- ❑ Simplilearn - Python for Beginners. Skills: Python

HOBBIES AND INTERESTS

- ❑ Drone flying and UAV technology
- ❑ Arduino electronics projects
- ❑ Python programming & Automation
- ❑ CAD design
- ❑ Exploring emerging technologies

REFEREES

- ❑ Shukri Afazov, Associate Professor of Manufacturing Engineering, Nottingham Trent University, Nottingham, England, shukri.afazov@ntu.ac.uk, +44 115 84 83212
- ❑ Anurada Ekanayaka, Financial Reporting Manager, Alter Domus UK Ltd, London, England, panurada.ekanayaka@gmail.com, +44 7384 769479