

Pranesh Selvaraj

DoB : 4 July 2001 | Siegen, Germany

LINKS

Portfolio:// [Pranesh Selvaraj](#)
Gmail:// praneshs281@gmail.com
LinkedIn:// [@pranesh-selvaraj](#)
Github:// [@Pranesh-Selvaraj](#)

SKILLS

PROGRAMMING LANGUAGES

JavaScript • Python • C/C++ • C#
SQL • HTML • CSS

TECHNOLOGIES

Django • ROS • React • MongoDB
Express.js • Vue.js • Node.js • Docker

SOFTWARE-TOOLS

Linux • Anaconda • Visual Studio
Jupyter notebooks • Fusion 360
Unity • Gitlab

WRITING &

PRESENTATION TOOLS

Microsoft Office • Google Workspace
Latex Overleaf

LANGUAGE

- Tamil (Native)
- English (Fluent)
- Deutsch (A2)

EXPERIENCE

WHB - FULL STACK DEVELOPER

APRIL 2024 – CURRENT | UNIVERSITÄT SIEGEN, GERMANY

- Develop and maintain university websites using the MEVN stack (MongoDB, Express.js, Vue.js, Node.js)
- Manage containerized applications using Docker for consistent development environments
- Implement CI/CD pipelines through GitLab for streamlined deployment and automation
- Collaborate with a team to build responsive, scalable, and user-friendly web applications
- Continuously adapt to new technologies to optimize project outcomes and stay updated with industry trends

PROJECT

IMMERSIVE KITCHENVR SLICING SIMULATOR

NOV 2023 - FEB 2024 | UNIVERSITY OF SIEGEN, GERMANY

Immersive KitchenVR Slicing Simulator is a cutting-edge Unity VR project, showcasing realistic physics and dynamic interactions for slicing and dicing in a vibrant kitchen environment. The experience highlights technical proficiency with Unity, XR Interaction Toolkit, and offers an engaging, lifelike virtual culinary journey.

Tools used: Unity, C#, MetaQuest, Cross-Platform development, Visual Studio

SMARTCOASTER

JUN 2023 - SEPT 2023 | UNIVERSITY OF SIEGEN, GERMANY

Our project aims to integrate an existing smart coaster prototype with a Point of Sale (POS) system and payment options. This coaster will enhance customer experiences in hospitality settings by allowing seamless ordering and payment for food and beverages.

Tools used: Python, Linux, Django, Visual Studio, HTML, CSS, JavaScript, API

GOD'S EYE

DEC 2019 – JUL 2020 | SRI ESHWAR COLLEGE OF ENGINEERING, INDIA

The project's goal was to develop an autonomous aircraft for disaster identification and alerting. Our team innovatively designed a unique flight system inspired by the dragonfly's anatomy. We named our project "GOD's EYE" and presented it at the SIH 2020 Internal Hackathon. This effort led us to become finalists in the Smart India Hackathon (SIH) 2020, hosted by the Government of India.

Tools used: Solidworks, Linux, ROS Melodic Morenia, Visual Studio, Python and other aerial hardware.

EDUCATION

M.SC HUMAN COMPUTER INTERACTION

| UNIVERSITY OF SIEGEN, GERMANY

April 2023 - Current

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

| SRI ESHWAR COLLEGE OF ENGINEERING

June 2018 - May 2022 | Cum. GPA: 8.34 / 10.0

COURSEWORK

UNDERGRADUATE

Data Structures & Algorithms
Computer Architecture & Organization
Object Oriented Programming
Operating Systems
Database Management System
Computer, Communication and Wireless Networks
Circuit Analysis
Electromagnetic Fields
Systems and Signal Processing
Satellite and Optical Communication
Embedded and Real Time Systems

POSTGRADUATE

User Experience Design
Work & Organizational Psychology
Ubiquitous Computing
Usable Security
Applied Artificial Intelligence for Telecommunication
Machine Learning & Deep Learning
3D Printing for Rapid Prototyping
Human and Technology
Virtual Reality

CERTIFICATIONS

Interactivity with JavaScript
Machine Learning Using Python by Skyfi Labs and Roboversity
Python for Everybody by University of Michigan
Python course by Google
Fullstack Web development

More certifications are available for viewing on my LinkedIn profile.

MINI-PROJECTS & RESEARCH STUDIES

TIMEZONE CLOCK

User Experience Design

UNIVERSITY OF SIEGEN | JULY 2023

This project proposal is about an innovative idea for synchronized Timezone Clock designed for long-distance couples, capable of accurately depicting the prevailing light intensity and sky color at each partner's respective location. This innovative device will provide a visual representation of the distant environment, fostering a sense of connection by reflecting real-time conditions on each end.

Tools used: Figma, Photoshop, MS Office

NAO WITH TODDLERS

Robotics in real-world application in the field of social work

UNIVERSITY OF SIEGEN | MAY 2023 - JULY 2023

This study is conducted utilizing the NAO robot to investigate toddler emotions and interactions. We programmed NAO with engaging activities and games to elicit responses. Explored varying emotional expressions of children aged 10 to 36 months during interactions with NAO.

Tools used: Choregraphe 2.8.6, NAO Robot, Miro, the NAOqi 2.8 reference documentation, MS Office

BANK IDENTITY FRAUD SECURITY DESIGN SOLUTION : PROPOSAL AND STUDY

Usable Security

UNIVERSITY OF SIEGEN | JUNE 2023 - AUGUST 2023

This study examines shared victim experiences of online identity fraud in banking and social media through interviews with 5 participants and crime analysis. Identified patterns suggest a need for data-backed warnings to enhance security and reduce risks.

Tools used: Webex, Miro, MS Office, Figma, MAXQDA

RESEARCH PROPOSAL - IMMERSION AND POSSESSION OF SUPERPOWERS IN VR GAMES DECREASES THE FEAR OF HEIGHT

Beyond Real VR – Virtual Augmentations and Their Effects

UNIVERSITY OF SIEGEN | JULY 2023 - AUGUST 2023

The study involved two participants and examined the integration of Virtual Reality (VR) technology for treating acrophobia. VR's immersive quality was utilized to create emotional engagement in height-related scenarios, predicting a positive correlation between immersion and fear reduction.

Tools used: MS Office, LaTeX, HTC Vive Virtual Reality System

PUBLICATIONS

Venugopal, E., Ramesh, A., Sivakumar, P., & Selvaraj, P. (2023, March). Design of Hybrid UAV With Multi Rotor Propulsion System. In 2023 9th International Conference on Advanced Computing and Communication Systems (ICACCS) (Vol. 1, pp. 1798-1802). IEEE.

<https://doi.org/10.1109/ICACCS57279>