

Pranesh Selvaraj

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LINKS

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EDUCATION

M.SC HUMAN COMPUTER INTERACTION

| UNIVERSITY OF SIEGEN, GERMANY
April 2023 - April 2026
GPA: 2.0

B.ENG ELECTRONICS AND COMMUNICATION ENGINEERING

| SRI ESHWAR COLLEGE OF ENGINEERING, TAMIL NADU, INDIA
June 2018 - May 2022
Cum. GPA: 8.34 / 10.0

SKILLS

PROGRAMMING LANGUAGES

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

TECHNOLOGIES

- MongoDB • Vue.js • Node.js • Docker
- Ansible • React • REST APIs • Django
- Kubernetes • PostgreSQL • CI/CD
- Express.js • ROS

SOFTWARE-TOOLS

- Linux • GitLab • GitHub • Figma
- Visual Studio • Unity • Fusion 360

DOCUMENTATION & PRESENTATION TOOLS

- Swagger • Markdown • LibreOffice
- Google Workspace • Latex • Canva

EXPERIENCE

WHB - FULL STACK / DEVOPS ENGINEER

APRIL 2024 – PRESENT | UNIVERSITY OF SIEGEN, GERMANY

- Develop and maintain university web platforms using the MEVN stack (MongoDB, Express.js, Vue.js, Node.js)
- Built internal security tooling, including a Python-based network port scanner to improve local system visibility and security posture
- Deploy and operate containerized services with Docker, Kubernetes, and OpenShift (Red Hat)
- Implemented CI/CD pipelines in GitLab and automated infrastructure workflows using Ansible
- Collaborate with cross-functional teams to deliver reliable releases and continuous improvements

PROJECTS

CRYPTLEARN

SEPT 2025 - APRIL 2026 | UNIVERSITY OF SIEGEN, GERMANY

- Built a full-stack e-learning platform for cryptography with authentication, dashboards, progress tracking, badges, and live encryption/decryption tools
- Developed secure REST APIs with JWT authentication, CRUD endpoints, and MongoDB integration; delivered a responsive React frontend
- Extended the Figma concept into a production-ready application with improvements in security, performance, accessibility, and maintainability
- Used as the primary case study in a Master's thesis on AI-assisted Figma-to-code workflows

Tools used: React, Vite, Node.js, Express, MongoDB, JWT, Tailwind CSS

HILFEGESCHICHTEN

MAY 2024 - SEPT 2024 | UNIVERSITY OF SIEGEN, GERMANY

- Migrated an underdeveloped Laravel/PHP prototype to WordPress and delivered a stable community platform for foreigners and elders in Siegen
- Implemented user management, database integration, and a timeline feed for sharing stories and requesting support
- Improved usability and accessibility for foreign and elderly users in the local community

Tools used: WordPress, PHP, MySQL, Elementor

IMMERSIVE KITCHENVR SLICING SIMULATOR

NOV 2023 - FEB 2024 | UNIVERSITY OF SIEGEN, GERMANY

- Developed a Unity VR simulation with realistic slicing mechanics, physics-based interactions, and immersive kitchen scenarios
- Integrated XR Interaction Toolkit features to improve interaction quality and user experience

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

LANGUAGES

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

SMARTCOASTER

JUN 2023 - SEPT 2023 | UNIVERSITY OF SIEGEN, GERMANY

- Integrated a smart coaster prototype with a POS system and digital payment workflow
- Enabled seamless ordering and payment to improve hospitality customer experience
- Built and tested web components and API integrations for end-to-end functionality

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

GOD'S EYE

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

- Developed an autonomous aircraft prototype for disaster identification and alerting
- Designed and validated a bio-inspired flight concept for emergency response use cases
- Presented at SIH 2020 Internal Hackathon and reached finalist status in Smart India Hackathon 2020

Tools used: Solidworks, Linux, ROS Melodic Morenia, Visual Studio, Python, Aerial hardware.

PUBLICATIONS

Selvaraj, P. (2026). AI-Assisted Web Development: Evaluating the Accuracy and Efficiency of Figma-to-Code AI Tools. Master's Thesis, University of Siegen, Human-Computer Interaction.

*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>*