

Parth Sanepara

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SUMMARY

Experienced **Embedded Firmware Engineer** with 5+ years of experience in designing, developing, and testing embedded systems and IoT solutions. Expertise in firmware development for wireless and wired technologies, including **BLE, Wi-Fi, Ethernet, and Cellular IoT**. Proficient in RTOS programming (**Zephyr, FreeRTOS**), low-power device development, and cloud integration using **AWS IoT Core**. Strong background in ARM-based MCUs, communication protocols (TCP/IP, MODBUS, MQTT), and embedded software debugging. Skilled in product prototyping, unit testing, and driver development for smart devices, sensors, and IoT applications.

EDUCATION

CDAC Bengalore

Istanbul, Turkey

B.Sc. in Electrical and Electronics Engineering; GPA: 3.62/4.00

Sep 2018 – Jun 2023

Minor Degree in Computer Engineering; GPA: 3.58/4.00

Oct 2020 – Jun 2023

National University Admission Exam (YKS): Ranked 75th in Mathematics and Science among ca. 2.3 million candidates with a test score of 489.92/500. (Jul 2018)

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SKILLS

Languages: Embedded C, Python, C++

Technologies: Django, Node.js, React.js, MySQL, MongoDB, Git, Docker, Amazon Web Services, Kubernetes, Google Cloud Platform, Unity, Linux, ROS, OpenCV, Scikit-Learn, PyTorch, Keras, TensorFlow

WORK EXPERIENCE

SemperTech

Istanbul, Turkey

Software Engineer

Sep 2023 – Present, Full-time

- Currently working on the “Arçelik Digital Home Energy” project in a collaborative effort with DAI-Labor at the Technical University of Berlin under the supervision of [Prof. Dr. Şahin Albayrak](#).
- Simulated data exchange processes with the EEBUS protocol suite using C# and Go frameworks. Migrated the entire framework from Go to C++ in order to ensure future adaptability for smart home IoT devices.

SESTEK Speech Enabled Software Technologies

Istanbul, Turkey

AI Research and Development Intern

Jan 2022 – Feb 2022, Internship

- Implemented various NLP tasks, including NER, POS tagging, sentiment analysis, text classification, and extractive/generative QA using transformers and Hugging Face libraries. Conducted a literature review on information retrieval and reading comprehension to stay updated on the state-of-the-art ML models.
- Developed a generative question answering system with Dense Passage Retrieval and Retrieval-Augmented Generation techniques using the Haystack framework on Python.
- Worked on a Turkish open-domain question answering system by fine-tuning a BERT base model transformer with PyTorch. Evaluated exact match and F1 scores using different Turkish data sets and DeepMind’s XQuAD data set and then tabularized the evaluation results.