



Anatolii Tsirkunenko

🏠 24.11.1997 (28 years)

🏠 Munich, Germany

✉ anatolii@tsi-ko.com

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📄 Summary

I am passionate about creating innovative projects and solutions in the Embedded Software Development domain (5+ years), as well as Web Development (3+ years), and using my leadership abilities to drive my team to success. With my diverse skill set and experience, I am confident in my ability to develop and lead complex software systems that can contribute to the advancement of the industry.

🏢 Work Experience

Cellular Software Engineer

1 year and 3 months 15.12.2023 — Current

🔗 Apple Inc. (Munich, Germany)

- Developed SW for Apple C1+ Modem (C / Cellular)
- Analyzed and fixed SW issues across Layer 1 (C / Traces Analysis)
- Brought up Unit Testing for Layer 1 (GoogleTest)
- Developed 2 Verification Frameworks for Layer 1&2 (C / Python)
- Developed multiple scripts for work optimization/automations (Python / Shell)

Embedded Software Developer BMS

3 years and 9 months 02.03.2020 — 29.11.2023

🔗 LION Smart GmbH (Garching, Germany)

- Developed SW and Architecture for BMS and internal projects (C / S32KX / RTOS / SPI / I2C / CAN / UART / Enterprise Architect)
- Developed multiple scripts for work optimization (Python)
- Lead a team of 5 people (Codebeamer / V-Model)

Firmware Developer (Volunteering)

3 years 11.11.2019 — 28.10.2022

🔗 TUM Hyperloop (Munich, Germany)

Developed SW and Architecture for the levitation controller and BMS (C / Infineon XMC4800 / STM32 Nucleo-144 / EtherCAT / SPI / UART / RTOS)

Master Thesis (Internship)

6 months 04.10.2021 — 31.03.2022

🔗 TUM (Munich, Germany)

Topic: Development and Evaluation of a Web of Things Simulation Framework

Researched simulating various IoT devices (Things) and proposed my own approach on simulating Things in the simulation environment (OpenFOAM) in (near) "real-time". (Python / TypeScript / NodeJS / Flask RESTful / Docker / IoT)

Research Internship (Internship)

3 months 05.04.2021 — 25.06.2021

🔗 TUM (Munich, Germany)

Topic: Run-Time Service Migration in Incrementally Granular Industrial Web of Things Systems

- Developed SW with several abstraction layers for Fischertechnik toy factory (TypeScript / NodeJS / WoT / IoT)
- Researched the possibility of migrating the abstraction layers to other devices (edges) at run-time, which was successfully implemented

Electronic Design Engineer

7 months 03.07.2017 — 18.01.2018

🔗 Modern Steel (Chelyabinsk, Russia)

- Developed SW for pellet boiler control systems (C++ / Assembly)
- **Electric Circuit Design** and assembly of pellet boiler control systems

🎓 Education

M.Sc. in Power Engineering

2 years and 6 months 01.10.2019 — 31.03.2022

🔗 Technical University of Munich (Munich, Germany)

Grade: 2.1/1.0, Topic: Development and Evaluation of Web of Things Simulation Framework

- Renewable Energy Systems
- Energy Storage Systems (ESS), including BMS
- Cyber-Physical Systems (State Machines / Automatas)
- Internet of Things (IoT) where I learned new standards like Web of Things (WoT) and a WoT Scripting API for it

Qualification in Python Dev.

1 year and 9 months 08.06.2020 — 24.02.2022

🔗 GeekBrains (Online)

Topic: Head Hunter Webiste

My final project for a head hunting website (GitHub Link).

Python / Django / Django REST + React / MySQL / MongoDB / VueJS / PyQT

B.Sc. in Electrical Engineering

3 years and 10 months 01.09.2015 — 20.06.2019

🔗 South Ural State University (Chelyabinsk, Russia)

Grade: 5/5, Topic: Design of an Electric Drive for the Movement of an Overhead Crane Trolley

- **Electronics**
- Electric Drives
- Low-Level Programming (C / Assembly Language)

🛠 Skills

Programming C, Python, JavaScript, TypeScript, Assembly, Unit Test, Software Architecture, Clean Code

Embedded CAN, CANOpen, UART, SPI, I2C, EtherCAT, Wi-Fi, TCP/UDP, RS485, RTOS

Web React, NextJS, Django (REST), Docker, Nginx, MongoDB, SQL, NodeJS, Websockets, HTML/CSS, SASS

Technologies BMS, IoT, Cellular Protocols, ISO26262, GoogleTest

Programs SEGGER, Enterprise Architect, CANalyzer, PCAN-Explorer, CANopen Explorer, MATLAB/Simulink

Languages English - C1, German - C1, Russian - Native

🏠 Projects

Personal Website [Website](#), [GitHub](#) 1 year and 10 months 01.05.2023 — Current

Developed a personal website primarily for displaying/customizing/generating PDFs of my own Curriculum Vitae (CV). (**TypeScript** / **NextJS** / **SASS** / **MongoDB** / **Nginx** / **Docker**)

Cafe Website [Website](#), [GitHub](#) 1 year and 3 months 06.06.2022 — 02.09.2023

Developed a cafe website using **Django Framework**. Features are continuously integrated according to the client needs

Telegram-Connected RT Website Chat [GitHub](#), [TG-Chat Implemented](#) 1 month 03.06.2022 — 09.07.2022

Developed a flexible SW for forwarding messages between a website chat and a telegram bot. (**Python** / **Websockets** / **MongoDB** / **Redis** / **Docker** / **Nginx**)

Cafe HVAC v2 [WoT GitHub](#), [Flask GitHub](#), [React GitHub](#) 8 days 02.01.2022 — 09.01.2022

Upgraded the previous HVAC system to provide a web control. The display and encoder were removed, the microcontroller was replaced with Raspberry Pi Zero. A simple interface based on React was created for a simple UI. A middleware Flask Server was created according to the customer needs. (**Python** / **TypeScript** / **React** / **IoT** / **Raspberry Pi Zero**)

Cafe HVAC 1 month 02.06.2019 — 04.07.2019

Developed HW and SW for an HVAC system for a cafe. The controller had a display and an encoder for user interface, temperature sensors and valves for observing and controlling the HVAC. (**C** / **ATmega328P** / **PCB Design** / **Bluetooth**)

Car Bluetooth RGB 4 months 01.04.2018 — 29.07.2018

Developed HW and SW for RGB LED control via Bluetooth. The system was successfully integrated into the car and was controllable via phone. (**C** / **ATmega328P** / **PCB Design** / **Bluetooth**)

Smart Window Opener 2 days 21.04.2018 — 22.04.2018

Participated in the local Hackathon with my friends where I developed HW and SW for controlling the stepper motor via Bluetooth. (**C** / **ATmega328P** / **Bluetooth**)

📄 Publications

WoT-Phyng-Sim: Integrating Physics Simulations with IoT Digital Twins using the Web of Things Jul 2023

[IEEE COINS 2023](#)

🎓 Certifications

5G Network Fundamentals [Coursera](#), Credentials A3LQ3WACWZ3A Oct 2023

4G Network Fundamentals [Coursera](#), Credentials XUAK3SPVGM3H Sep 2023

Real-Time Embedded Systems Theory and Analysis [Coursera](#) Mar 2023

Methods of Collecting and Processing Data from the Internet [GeekBrains](#), Credentials 1686932 Feb 2022

Architectural and Design Patterns in Python [GeekBrains](#), Credentials 1555153 Dec 2021

Django REST Framework [GeekBrains](#), Credentials 1412681 Oct 2021

JavaScript. Advanced Level [GeekBrains](#), Credentials 1259430 May 2021

Django Framework. Tools for Optimization [GeekBrains](#), Credentials 1225656 Apr 2021

Basics of Django Framework [GeekBrains](#), Credentials 1182190 Mar 2021

Fundamentals of Relational Databases. MySQL [GeekBrains](#), Credentials 986834 Oct 2020

Computer Networks [GeekBrains](#), Credentials 903250 Jul 2020

🔪 Hobbies

Programming | Tinkering Devices | Billiards | Photography (Past Professional) | Table Tennis