



Anatolii Tsirkunenko

🏠 24.11.1997 (26 years)

🏠 Munich, Germany

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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.

Skills

Programming C, Python, JavaScript, TypeScript, Assembly Language, Software Architecture, SOLID Design Principles, Clean Code

Embedded CAN, CANOpen, UART, SPI, I2C, EtherCAT, Wi-Fi, TCP/UDP, RS485, RTOS, ISO26262, BMS, IoT

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

Development Tools Eclipse, VSCode, IntelliJ, Enterprise Architect, CANalyzer, PCAN-Explorer, CANopen Explorer, WinIDEA, Ozone, MATLAB/Simulink

Languages English - C1, German - B2, Russian - Native

Work Experience

Cellular Software Engineer

11 days 15.12.2023 — Current

📍 Apple (Munich, Germany)

LTE/NR Software Development (C)

Embedded Software Developer BMS

3 years and 9 months 02.03.2020 — 29.11.2023

📍 LION Smart GmbH (Garching, Germany)

- SW and Architecture development for **BMS** and internal projects (C / **S32KX** / **RTOS** / **SPI** / **I2C** / **CAN** / **UART** / **Enterprise Architect**)
- Scripts for work optimization (**Python**)
- Leading the team of 5 people (**Codebeamer** / **V-Model**)

Firmware Developer (Volunteering)

3 years 11.11.2019 — 28.10.2022

📍 TUM Hyperloop (Munich, Germany)

SW and Architecture Development 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

I have done a research on 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

I worked with Fischertechnik toy factory where I had to write software with several abstraction layers. I have researched the possibility of migrating the abstraction layers to other devices (edges) or PCs at run-time, which was successfully implemented. (**TypeScript** / **NodeJS** / **WoT** / **IoT**)

Electronic Design Engineer

7 months 03.07.2017 — 18.01.2018

📍 Modern Steel (Chelyabinsk, Russia)

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

Projects

Personal Website 📄 Website, 📄 GitHub

8 months 01.05.2023 — Current

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

Cafe Website 📄 Website, 📄 GitHub

1 year and 7 months 06.06.2022 — Current

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

Telegram Website Chat 📄 GitHub, 📄 TG-Chat Implemented

1 month 03.06.2022 — 09.07.2022

A flexible software 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

I have 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

I have developed hardware and software for Heating Ventilation and Air Conditioning (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

I have developed hardware and software 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

I participated in the local Hackathon with my friends where I developed the hardware and software for controlling the stepper motor via Bluetooth. (C / ATmega328P / Bluetooth)

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).

Keywords: 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)

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 [GeekBrains](#), Credentials A3LQ3WACWZ3A Oct 2023

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

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

Agile/Scrum [GeekBrains](#), Credentials 1698504 Feb 2022

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

Python. PyQT [GeekBrains](#), Credentials 1437567 Oct 2021

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

Client-Server Applications in Python [GeekBrains](#), Credentials 1302871 Jun 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

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