

Anatolii Tsirkunenko

24.11.1997 (28 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, Cellular Protocols

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

2 years and 11 months 15.12.2023 — Current

Apple (Munich, Germany)

- Developed SW for Apple's Cellular Modem (**C** / **Cellular**)
- Analyzed and fixed SW issues across Layer 1 (**C** / **Traces Analysis**)
- Developed 2 Verification Frameworks for Layer 1&2 (**C** / **Python**)
- Developed a vast amount of 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

Projects

Personal Website

Website, GitHub

3 years and 6 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**)

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**)

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
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