Alexander Kondratyev

Embedded Engineer

Iserlohn, Germany
+49 (172) 393 17 67
alexander.kondratyev.dev@gmail.com
https://alexkondratyev.github.io/linktree/
https://t.me/kondratyev_an
https://www.linkedin.com/in/alexandr-kondratyev-dev/
https://github.com/AlexKondratyev

Personal Details

Date of birth: 3 September 1994 (30 years old) in Omsk, Russia. Marital status: married, 1 kid. Nationality: Russian. From 2021 to 2023 Head of sector in Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP). From 2019 to 2023 Junior researcher Institute of Radiophysics and Physical Electronics – subdivision of Omsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences (IRPhE OSC RAS).

Education

Post-graduate student
Sept. 2018 – June 2022

Dostoevsky Omsk State University (OmSU)

Diploma thesis: Modeling of microwave communication channels based on the forecast of the state of the ionosphere.

Master of Science in Physics
Sept. 2016 – June 2018

Dostoevsky Omsk State University (OmSU)

Diploma thesis: Prediction of F2 critical frequency using statistical analysis.

Bachelor of Science in Physics
Sept. 2012 – June 2016

Dostoevsky Omsk State University (OmSU)

Diploma thesis: Research intensity distribution in the laser beam cross section.

Experiences

I have the skills to write application and embedded software. Knowledge of programming languages: C/C++ Python. Git. Knowledge of the architecture of STM32 series microcontrollers. Core: (Registers, Bus, Flash / SRAM / DRAM memories). Periphery: (GPIO, PWM, Watchdog, ADC, DMA, EEPROM, RTC). Features: (Interrupters, Timers, Counters). I used UART, SPI, I2C and 1Wire protocols in projects. Studied circuit and printed circuit board (PCB) design. Developed several electrical circuits in EasyEDA and KiCad EDA. I have ability to read documentation of various components such as (ADC, DAC, EEPROM, Operational amplifiers, etc.). Used USB protocol like CDC, DFU and HID classes in projects. Used open source file systems: FatFS, littleFS and NASA FS, in projects with a complex data storage structure. I have mentored for junior developers on one of the projects.

Head of sector
Oct. 2021 - May 2023

Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)

Junior researcher
Oct. 2019 - May 2023

Institute of Radiophysics and Physical Electronics – subdivision of Omsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences (IRPhE OSC RAS)

Middle Software Engineer
Jan. 2020 - Oct. 2021

Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)

Junior Software Engineer
Jan. 2018 - Jan. 2020

Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)

Engineer
Oct. 2016 - Jan. 2018

Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)

Conferences, Articles & Certificates

Article in scientific journal Advances in Space Research 2023
Improving forecasting accuracy the F2-layer peak characteristics using artificial neural network (Author)

Article in scientific journal Radio communications 2022
Algorithm for increasing the accuracy of recovering total electron content by code and phase delays of signals of global navigation satellite system (Author)

Article in scientific journal Radio communications 2021
Implementation of adaptive product customization processes in mass production (Author)

IV international scientific and technical conference 2021
The method of adjusting the empirical coefficients of the ionosphere model to improve the accuracy of predicting the critical frequency of the F2 layer (Author)

IV international scientific and technical conference 2021
Evaluation of the efficiency of using GNSS for forecasting the total electron content (Speaker, Author)

Article in scientific Journal of Atmospheric and Solar-Terrestrial Physics 2020
Improving the ionospheric model accuracy using artificial neural network (Author)

Article in scientific journal Radio communications 2018
Adaptation of the ionospheric model for calculation of the critical frequency of F2 layer (Author)

IV international scientific and technical conference 2017
Forecasting critical frequency of layer F2 on the based of methods of statistical analysis (Speaker, Author)

Regional student scientific and practical conference “Youth of the Third Millennium” 2016
Distribution of intensity in the cross section of the laser beam (Speaker, Author)

Awards

Winner in the nomination "Best Software Solution of the Year" 2023
for the development of an automated control system.

Winner of the All-Russian competition "Engineer of the Year" 2022
link

Best young Professional of the Year in Software Development 2021
link

Best young Professional of the Year in Software Development 2018
link

Languages

Russian (Mother language)

English (A2)

Deutsch (B1)

Skills Proficiency

Linux | C | C++ | Python | STM32 | AVR | Google Test Framework | SQL | PostgreSQL | Django | Eclipse | VS Code | Qt | KiCad EDA | Docker | GitLab | CI/CD | Agile | Circuit design | System design