Cătălin Creciunel

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Gender: Male   **Date of birth:** 22/10/1999   **Nationality:** Moldovan

WORK EXPERIENCE

[11/2021 – Current]

Engineer part-time

National Center for Material Study and Testing

City: Chișinău | **Country:** Moldova | **Name of unit or department:** MIB | **Business or sector:** Education

Projects:

- **Ultrasonic Signal Management Device:** Developed a device to manage ultrasonic signals for enhanced cell growth
- **Temperature Control System:** Designed a system to control the temperature of a 220V thermal reactor using a microcontroller, with temperature adjustments via Wi-Fi
- **Semiconductor Fiber Production Device:** Currently working on a device to produce semiconductor fibers using the electrospinning technique

Responsibilities:

- Fabrication of stratified and porous semiconductor structures
- Development of oxide-based semiconductor materials at nanoscale
- Optimization of growth parameters for enhanced electronic properties
- Utilized advanced characterization techniques including XRD, SEM, and electrical measurements to analyze material properties
- Participated in scientific conferences and competitions, presenting research findings on nanoscale semiconductor materials

[11/2023 – 11/2024]

Software Engineer full-time

Schölly Fiberoptic GMBH

City: Freiburg im Breisgau | **Country:** Germany | **Name of unit or department:** R&D | **Business or sector:** Human health and social work activities

Projects and Responsibilities:

- Developed embedded systems using Microchip microcontrollers, implementing drivers with the Observer pattern
- Worked on NVIDIA Jetson platforms to develop image processing algorithms for disparity calculation using OpenCV, VPI, and CUDA
- Created user interfaces for data visualization using Streamlit
- Responsible for software testing of advanced devices and technical documentation
- Implemented image acquisition and processing pipelines for specialized optical systems

[05/2022 – 11/2023]

Team member, group "Embedded Systems" full-time

ICG Engineering

City: Chișinău | **Country:** Moldova | **Business or sector:** Information and communication

Projects:

- Machine with finite states, using Atmega328, C language
- Motor speed regulation, using PID controller, C++
- PID adjustment, using C++ for STM 32
- Control temperature with PID, using ESP32 from Bluetooth
- Patient monitor, using STM32 and ESP32, (ECG, pulse oximetry, temperature, humidity, CO, CH4, Ethanol)

[02/2021 – 05/2022]

Information Technologies Lecturer part-time

Impact Academies

City: Chișinău | **Country:** Moldova | **Business or sector:** Education

Projects and Responsibilities:

- Robotics courses

- C++ courses
- Creating study programs

EDUCATION AND TRAINING

[10/2023 – Current]

Master's degree in Microelectronics and Nanotechnologies

Technical University of Moldova

City: Chișinău | **Country:** Moldova | | **Thesis:** Design and Implementation of a Nanofiber Manufacturing System Using Electrospinning Technology

[09/2019 – 06/2023]

Bachelor's degree in Microelectronics and Nanotechnologies

Technical University of Moldova

City: Chișinău | **Country:** Moldova | | **Final grade:** 9,48 of 10 | **Thesis:** SYNTHESIS AND STUDY OF ZINC OXIDE LAYERS

[10/2021 – 04/2022]

Exchange student: Automotive engineering

"Gheorghe Asachi" Technical University of Iasi, Romania

City: Iasi | **Country:** Romania |

- Embedded Systems Applications
- Modern design techniques of multiphase asynchronous machines
- Conducted Emissions - introduction, design, testing

Junior specialist in diagnostics systems

Center of Excellence

City: Chișinău | **Country:** Moldova | | **Final grade:** 9,12

LANGUAGE SKILLS

Mother tongue(s): Romanian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B1

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

German

LISTENING A2 **READING** A2 **WRITING** A2

SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

Russian

LISTENING C1 **READING** C1 **WRITING** B2

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PERSONAL SKILLS

Team player, critical thinking, highly motivated