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Profile

Third-year undergraduate at NRNU MEPhI. Focused on systems and backend development, algorithms, multithreading, Linux infrastructure and data processing. I design APIs, modular architectures and validation scenarios. I am interested in high-load systems and GPU computing.

Technical skills

C/C++ and algorithms. C17, C++20, STL, RAII, smart pointers, templates, multithreading and synchronisation, POSIX, data structures, finite automata, Flex/Bison.

Backend / Web. Java, Spring Boot (coursework), Python, Next.js (project experience), JavaScript and TypeScript fundamentals, Angular and Payload CMS (website project), REST APIs, HTML/CSS.

Databases. SQL (fundamentals), H2 (coursework), PostgreSQL, CloudNativePG and Valkey (Skeleton configuration), Trino, Apache Iceberg, MinIO/S3 and NFSv4 (analytical data and infrastructure work).

Data Science. Python, R, Jupyter Notebook, R Markdown and Quarto. Coursework in statistics, regression, classification, clustering, time series, text retrieval and association rules. RStudio Server and Apache Superset are part of the Skeleton stack.

DevOps / Linux. Debian, UNIX, macOS, KVM/QEMU, libvirt, qcow2, cloud-init, OpenTofu, Ansible, Bash, OCI, containerd, k0s, Flux CD, Forgejo Actions, OCI Registry. Skeleton stack: SOPS/age, OpenBao, step-ca, TLS/X.509, Linux Bridge, NAT, nftables, SSH, CoreDNS, NGINX, Traefik, VictoriaMetrics, Trivy, Cockpit, NATS, Redpanda Connect, LVM, VFIO and NVIDIA Device Plugin. Research practice in NVIDIA CUDA, Apple Metal and spatial simulations.

Testing and build. Git, CMake, GoogleTest/CTest, ASan/UBSan, concurrency and stress testing.

Experience

Web development (2026): contributed to improving and deploying a Next.js application, and to build and release workflows on Linux. Tutoring in mathematics, physics and computer science.

Independent projects

FileCollector. Thread-safe file assembly from asynchronous chunks: overlaps, duplicates, completeness, immutable snapshots and lifecycle. Multithreaded and failure tests.

mangen. File manifest generator: concurrent directory traversal, SHA-2, deterministic output, CLI and partial failure handling.

RegEx. Regular expression library: NFA/DFA construction and minimization, matching and formal language operations.

Skeleton. Reproducible deployment of the Dozen computing lab: virtualization, isolated networks, configuration and automation workflows.

Research

RPS CUDA. Research rock–paper–scissors cellular automaton with empty cells, parallel CUDA grid updates and Metal client visualization.

Trino / Iceberg / MinIO. A coursework lakehouse built with Trino, Iceberg and MinIO. All eight SQL checks passed on 26 November 2026. Reprocessing the same batches produced no new events.

Education and coursework

National Research Nuclear University MEPhI · 09.03.01 Informatics and Computer Engineering · Computer Systems and Technologies · Bachelor’s programme, year 3 (November 2026).

Programming and systems. Algorithms and data structures, OOP, low-level programming, automata theory, UNIX, computers and peripherals.

Mathematics. Calculus, linear algebra, analytical geometry, discrete mathematics, differential equations, probability theory and mathematical statistics.

Current coursework. Databases, data science, DevOps fundamentals, digital logic design, computer graphics and image processing, peripheral interfaces (November 2026).

Upcoming coursework. Operating systems, networking and telecommunications, computer organisation, information security and microprocessor systems.

Additional information

Olympiad. Third-degree diploma, I. Ya. Verchenko Olympiad in Mathematics and Cryptography (2022).

English. Approximately B1 (self-assessed, no exam). Spoken communication and listening comprehension.

Availability. 20–40 hours per week, remote or hybrid.