Andrei Petrov
Embedded software developer

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I am an embedded software developer with a background in the aerospace industry and electrical engineering. I've been writing flight software for CanSat satellites in C since early high school. Now I design payload electronics for CubeSats.

Some of my projects include home automation systems, websites and model rocket payload electronics. Be sure to check out my flagship project: a real-time operating system kernel for 8-bit microcontrollers.

SKILLS

Tools and Languages	C/C++, Assembly (AVR, x86), Python, Git, LaTeX, HTML/CSS/JS, VMware ESXi
Electrical Engineering	KiCad EDA, Proteus 8, LTSpice/NGSpice
MCU Architectures	AVR8, Cortex-M0 (STM32), Cortex-M3 (SAM3X), Cortex-M4 (STM32)
Communication	English (C1), Russian, Cat 2 Russian Amateur Radio License

TECHNICAL EXPERIENCE

Electrical Engineering Lead / YKTSAT-1 CubeSat — **Jul 2020 — Present**
Sakha Aerospace Systems, LLC — *Yakutsk, Russia*

- CubeSat payload module electronics design.
- Flight software development in C.
- Ground station operations, radio communication and satellite control.
- Documentation handling, management and project supervision.
- Network and server maintenance, cloud service self-hosting (Nextcloud, Gitlab, Onlyoffice).
- Fullstack WebDev (Django), GitLab CI/CD, DevOps – `yktaero.space`

Tutor / Yakutsk International Research School — **Aug 2021 — Sep 2021**
Sakha Junior Science Academy — *Yakutsk, Russia*

- Student project supervision in aerospace science.
- Teaching C programming basics, electrical engineering, electronics assembly.
- Papercraft rocketry.

Intern - Junior Software Developer — **Mar 2021 — Jun 2021**
«Sever» Information Security Center, LLC — *Yakutsk, Russia*

- Website fullstack development, Flask/Python.
- Backend development, email malware filter in Python.
- Network and system administration, VMware ESXi management.

Intern - Electrical Engineer — **Jun 2019 — Nov 2020**
Shafer Institute of Cosmophysical Research — *Yakutsk, Russia*

- Electronic circuit design, assembly and repair.
- Working with satellite communication equipment, radio communication basics.
- High energy particle physics course.

* Internships shorther than 1 month are not listed.

EDUCATION

High School, *V.P.Larionov Physics & Technical Lyceum* — 2012 — 2020

ACTIVITIES

Sakha Junior Science Academy @ Yakutsk – Satellite Ground Station Operator	2021 — Present
MSU Aerospace Engineering School (RosCanSat competition) – Team Leader / Programmer	2018 — 2020
Space-Oriented Learning for Americans and Russians (SOLAR program) – Finalist	Summer 2020
Scientists of the Future Internetional competiton of research and engineering projects @ Moscow Research Presenter, 3rd place	Fall 2019
National Taiwan University Science Innovation School – Student, Research Presenter	Summer 2019
«Big Challenges» All-Russian project competition @ Sirius Center – Finalist	Summer 2019
International Science Youth Forum, Hwa Chong Institution @ Singapore – Research Presenter	Winter 2018
WorldSkills Russia Finals in Space Systems Engineering @ Moscow – Participant, Silver award	Winter 2018