

Sergey Bashkirov

1020 3rd street – 94945 Novato California – USA

☎ +1 (415) 123 4567 • ☎ +1 (571) 405 0833 • ✉ litedictteam@gmail.com • 🌐 github.com/z80
in [linkedin.com/in/sergey-bashkirov-52295279](https://www.linkedin.com/in/sergey-bashkirov-52295279)

Goal

Software Engineer with R&D experience in Atomic Force Microscopy, Raman TERS imaging with a focus on software and firmware development with active opensource community participation is seeking for a full time position in software/firmware development.

Areas of expertise

Crossplatform programming: GUI, hardware communication

Firmware design: Real time firmware, actuators control, physical properties measurement, RTOS and bare metal firmware

Visualization: Widgets design, Spatial, 3D geometry, 3D visualization

RPC design: Remote control over network

Scripting and automation: Scripting languages, embedded scripting, bare metal firmware scripting

Math: Computer vision, Kalman filtering, machine learning, statistics, data, image processing

Technical proficiencies

Platforms: Linux, Windows, ChibiOs, FreeRTOS.

Scripting: Lua, Ruby, Python, SQL, R, Shell scripting.

Programming: C, C++, Java, microcontroller assembler.

Web technologies: Ruby-on-rails4, Javascript, Bootstrap

Work

Aist-NT Inc.

Software Engineer

Novato, CA

- Created and maintained main software package for microscope control, implemented a few AFM scanning and Raman spectral mapping modes, designed video microscope image mapper.
- Designed scriptable GUI building framework and embedded real time scripting language for scanning modes prototyping and actuators control. User this toolset for creating measurement modes and tip search automation.
- Created firmware for a number of devices for actuators control and physical properties measurement, designed PCB for a few hardware solutions.
- Created WEB based software for warehouse keeping, production control, expenses calculation. Built statistical predictive models for parts consumption, sales forecasting.

Transmag

Contractor

Santa Rosa, CA

Designed USB communication firmware, cross platform control software for BLDC motor controller. Suggested electrical design rules for communication line design.

Education

Moscow Institute of Physics and Technology

Master of Science in Applied Mathematics and Physics

Moscow, Russia

- Circuits & Electronics, Machine learning, SAAS, Autonomous navigation, Statistics with R, Node.JS, Angular.JS, Bootstrap, JavaScript.

Open source projects participation

grambo-pi.com: Created expandable stackable PCBs set for RaspberryPi computer for robot prototyping.

xonotic.org: Created Blen2map Blender3D to MAP exporter.

chibios.org: Submitted I2C slave mode driver, IWDG driver.

QtLua: Provided a patch making Object::connect() work in the same way as in Qt.

Gaw: Provided a patch fixing crashes with default configuration file for gaw waveform viewer.