

Maxim Bortnikov

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 [instructables.com/member/Northstrix](https://www.instructables.com/member/Northstrix) |  medium.com/@Northstrix |  github.com/Northstrix

Skills

- C++ | Embedded C | C# | .NET | Java | Python | Next.js | React | Angular | Vue | TypeScript | HTML/CSS | AES-256 | Serpent | Blowfish
- JavaScript | Whirlpool | Swift | Vapor | HMAC-SHA3-512 | ML-KEM-1024 | Docker | ChaCha20 | npm | hash-wasm | mipher | Argon 2
- Google Firebase | HMAC-SHA256 | ECDSA | Digital Signatures | Cryptography | Virtual Machines | SQLite | Linux | Microcontrollers
- Embedded Systems | ESP32 | Teensy 4.1 | STM32 | Backend | Frontend | Cryptography | Block Ciphers | Data Security | Data Integrity
- Languages: Fluent: English, Russian | Conversational: Hebrew, German | Beginner: Spanish, Italian

Projects

- **Blueberry Loom:** Made a form builder equipped with end-to-end encryption :: Next.js | Nuxt | Vue | ML-KEM-1024 | ChaCha20 | Serpent | HMAC-SHA3-512 | Firebase | i18n | zustand | Typescript | hash-wasm | mipher | toasts | GSAP | motion | metrics
Link: <https://blueberry-loom.netlify.app/>
- **Namer UI:** Assembled a collection of modern, visually appealing, reusable Typescript components.
Next.js Version: <https://namer-ui.netlify.app/> Vue Version: <https://namer-ui-for-vue.netlify.app/>
- **In-Browser File Encrypter:** Made a file encrypter that enables the user to encrypt their files locally in the browser :: HTML | CSS | JavaScript | AES-256 CBC | HMAC-SHA512 | PBKDF2 (SHA-512) | crypto-js
Link: <https://northstrix.github.io/In-Browser-File-Encrypter/V1.0/web-app.html>
- **Midbar:** Created a fully-functional open-source data vault from scratch :: Embedded C | AES-256 | ESP32 | Blowfish | RFID | STM32F407 | Serpent | HMAC-SHA256 | ESP8266 | Google Firebase | Teensy 4.1 | Raspberry Pi Pico | ILI9341 | ST7789 | RTL8720DN
WebFlash: <https://northstrix.github.io/Midbar-ESP32-CYD-Firebase-Edition/flash>
Wokwi Simulation: <https://wokwi.com/projects/374498956604379137>
- **Lantern:** Made a functional wireless controller for the addressable RGB LED strip :: Embedded C | SPIFFS | ESP32 | ESP8266 | Serpent | ESP NOW | Nintendo Wii Nunchuk | TFT_eSPI | Sprite animation | Brightness Control

Work Experience

- **Unpaid Intern @ Bazium:** 1/2025 – 3/2025
Learned to make websites using Bazium website builder; Got familiar with YAMM (Yet Another Mail Merge);
Learned the cold outreach technique; Developed localization tool compatible with Bazium-built websites (on my own initiative).

Experience

- | | | |
|---|-----------------------------|-------------------------|
| Maker | <u>Instructables</u> | 1/2021 – 7/2024 |
| • Produced more than 70 tutorials involving various microcontrollers, from ESP32 to Teensy 4.1. | | |
| Independent Developer | <u>GitHub</u> | 3/2019 - Current |
| • Created more than 80 repositories with open-source code written in several programming languages. | | |

Education

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|--|---|-------------------------|------------------------|
| Secondary Education | <u>Rubtsovsk Agrarian-Industrial College</u> | <i>Rubtsovsk, Altai</i> | 9/2016 - 7/2020 |
| • Computer Systems and Clusters | | | |
| Bachelor of Computer Science | <u>Altai State Technical University</u> | <i>Barnaul, Altai</i> | 9/2020 - 7/2024 |
| • Major in Informatics and Computational Devices | | | |

Certifications

- [Cryptography I by Stanford University offered via Coursera](#) (2/2020)
- [Information Security: Context and Introduction by University of London offered via Coursera](#) (3/2020)
- [Industrial IoT on Google Cloud by Google Cloud offered via Coursera](#) (5/2020)
- [Astronomy: Exploring Time and Space by University of Arizona offered via Coursera](#) (6/2020)
- [Develop and Deploy Windows Applications on Google Cloud by Google Cloud offered via Coursera](#) (4/2021)