

Nikoloz Otiashvili

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Software Developer

- Broad knowledge of programming for a wide range of platforms.
- Possess strong skills in developing robust and time-critical software.
- Experience in mentorship and managing small groups.
- Ability to quickly learn and apply new technologies.
- Highly proficient at writing technical documents.
- Adept at quick prototyping and toolmaking.
- Bilingual fluency in Georgian and English, B2 in German, and B1 in Russian
- Extensive experience in game design and development.

Tech Summary

- C, hardware programming, Unix sockets
- Bash, POSIX shell, standard Unix tools (make, sed, grep...)
- HTML/CSS/JS, Canvas, DOM, React, Gatsby, NetlifyCMS
- Nodejs, Expressjs, Jest, jin
- Lua5.1, LuaJIT, Love2D (SDL), GUI programming and automated testing
- Python, Selenium
- Go, net/http
- MySQL, MariaDB, MongoDB
- Nginx
- Systemd, cron, Linux kernel configuration
- Multidrop bus protocol (MDB/ICP), REST
- Free and open source software enthusiast and contributor

Work Experience

DataArt, July 2021 - Present

Senior Nodejs Developer

Redberry, April 2021 - June 2021

Full-stack Developer on Tweak

Worked on an online learning platform using Laravel and Blade.

Full-stack Developer on DefiCity

Developed a web service that lets users open packs of collectible cities, mint them on the blockchain, make them available as NFTs, and to stake cryptocurrency on them.

I undertook the following tasks:

- Helped the clients and PMs estimate the scope, time, and resources required for the project
- Wrote front-end code that interacts with cryptocurrency wallet providers and the blockchain network (to trigger Mint/Transaction events which later get propagated to the server)
- Designed and developed a server using Node with Web3js that communicates with the Binance Smart Chain network, and listens for blockchain events using

WebSockets

- Built custom database migration & seeding manager
- Wrote extensive documentation for the developers and the clients
- Worked closely with the clients to define and expand the specification of the service

Alternative Georgia, November 2018 - April 2021

Lead Software Developer on Sigma Vending Machine Project

Designed, architected and implemented server and client software used by custom vending machines with touch screens. Used by Alternative Georgia and PSP to gather data and sell medical products.

Client software I wrote includes:

- GUI in Lua and hardware facing code in C, connected with LuaJIT FFI
- automated UI testing module for recording and replaying events
- MDB/ICP library in C for controlling the machine motors, coin mechanism and paper cash mechanism
- RFID polling/reading library in C for different RFID readers
- Watchdog in Bash for switching between backup USB internet modems on connection loss

Used a Ubuntu VPS as a server with Nginx reverse proxy. The software I wrote includes:

- Server in Nodejs and Express which handles transactions and tracks cash storages and product stocks
- Frontend in vanilla JS for AltGeorgia and PSP admins for viewing and exporting data
- Unit and integration tests using JestJS
- Custom DI & IOC library with mocking support
- Fork of morgan-body for better formatted logs
- Small Go server for user survey linked from QR code

I hired and mentored a junior web developer who worked on a part of the frontend code for user feedback and Excel exporting.

I also wrote in-house tools:

- Vending machine power and application crash monitor
- RFID card tester, which was used to read all 5000 card IDs into a database, saving our QA weeks of work
- CLI program for remote-controlling the vending machines (dispense, eject...)
- A4 paper cut-out QR code generator in Lua which encoded 1800 uids

Wrote architectural overview and extensive documentation on the code and each tool for both users and developers. Maintained the machines and the server, including fixing hardware issues on call.

Software Developer on Matanga Research Project

Wrote web scraper for online drug store "Matanga" using Python with Tor and Selenium.

Wrote a server in Go that exports the gathered raw product data and transforms it into

a chronological list of transactions using an algorithm I designed which compares hourly stocks to estimate sale times and prices. Made the frontend in vanilla JS.

Software Developer for altgeorgia.ge

Wrote <https://altgeorgia.ge> using React and Gatsby. Implemented the CMS in NetlifyCMS. Also wrote a small analytics server for it in Nodejs. [The website is open source.](#)

Georgian-American School in Batumi, September 2019

Guest Lecturer

Led programming workshops for high schoolers. I taught them basic Javascript using a game I had made for them using HTML5 Canvas. Their JS code gets eval()d, the function calls are queued and executed slowly for better visual feedback. They figured out how to reprogram the game and make their own levels. [I open sourced the game.](#)

Buckwood School in Tskhneti, August 2018

Guest Lecturer

Delivered a one-time lecture for highschoolers at Buckwood school about artificial intelligence, evolutionary algorithms, and machine learning. Wrote and showcased a small tech demo of an evolutionary algorithm in Lua which learns to navigate a maze. [It is open source.](#)

Slami, January 2018 - April 2018

Independent Contractor / Software Developer

After winning the Media Hackathon in Tbilisi in 2017 with a prototype of Slami, my teammate (marketer) and I (programmer) were hired to finalize the product and [make it open source.](#)

I wrote Slami in React. I use an HTML5 Canvas to generate a video with client-side Javascript instantaneously after the user quickly creates a slideshow with images and text. I also wrote [Scrapie](#), a server for Slami that scrapes and proxies images from Bing and returns relevant ones.

Xplore, October 2016 - January 2018

Co-founder, CTO, Software Developer

Founded Xplore and developed an android application using Java, Kotlin, and Firebase for hikers that allowed them to organize/find/join hiking trips. Also built a [website](#) with React, a [static blog](#) with Jekyll, and a [proof-of-concept version of the app](#) in React Native. [All source code is available.](#)

The Android application won 2nd place in the mobile application category at the international GoldenByte Challenge held in Ukraine.

Lemondo, February 2014 - June 2015

Intern Game Developer on Dungeon Spawn

Lemondo helped me finish "Dungeon Spawn", a game I started developing in Unity3D using C# at the Georgia Innovations Week hackathon in 2014. The game won 1st place

in the iOS category and the prize was Lemondo's help in publishing for iOS. The game is available on both [Android](#) and [iOS](#).

Relevant Interests

Gdevi Meetup

Small Georgian game development meetup which I organize once every 2-3 months in Tbilisi. I give talks and invite professionals from the game development field who also do the same. [I record and upload all Gdevi talks and resources.](#)

Compilers

Wrote an [assembler](#) in C99 for the Hack virtual machine from Nand2Tetris and presently working on the [virtual machine](#) implementation.

Renderers

Wrote a small and limited [software renderer](#) in C99. Also made a [raycast renderer](#) in Lua.

Genetic Algorithms

Designed and wrote genetic algorithms for a [rubik's cube solver](#) in C99 and a [maze navigator](#) in Lua.

Game Development

I like prototyping novel game mechanics, some during game jams. At this point I have written over 50 small games and demos in HTML5 Canvas (JS), Unity (C#), Love2D (LuaJIT), Cocos2D (C#). Won a game jam in Tbilisi once with my game [Shamen](#). Most of my games are open source.

Other interests

Swimming, Brazillian Jiu-Jitsu, wrestling, calisthenics, parkour, reading (philosophy, history, politics), cooking, nutrition.

Education

University of Business and Technology

Tbilisi, October 2017 - January 2020

Studied information technologies. 99th percentile in GPA (3.80+) and was receiving a stipend for it throughout my study there.

Yale University

Connecticut, USA, July 2016 - August 2016

Won a scholarship from Yale University for the two-week summer program "Yale Young Global Scholars" on technology, innovation, and entrepreneurship. Delivered a TED talk "Why videogames are the highest form of art" for an audience of ~300 people, worked with team on research project for potential uses of nanobots in treating atherosclerosis.

Ruhr University Bochum

Ruhr, Germany, July 2016

Won a scholarship from Goethe Institute to attend a one-week STEM summer program. Got to attend lectures at the technical universities in Dortmund, Duisburg, and Bochum.

First experimental public school

Tbilisi, September 2009 - June 2017

Finished with a golden medal, equivalent to 4.0 GPA. In 2015 wrote testing software in C# and Windows Forms for olympiads held at the school.