

Miloš Zivlak

Software Engineer

milos@zivlak.rs | zivlak.rs | github.com/zivlakmilos

Currently

I am a self-employed Software Engineer working on web, mobile and embedded systems. In addition to my professional expertise, I actively dedicate my free time to build development tools that improves the software development workflow. Currently learning VHDL and HTMX.

Languages

C/C++ - Embedded Software, Drivers, Tools, Qt Framework
TypeScript/JavaScript - Nnode.js, Express, NestJS, ReactJS, SolidJS, React Native, Frameworks and tools development
Lua Script - Integration in C projects, NeoVim plugin development
Python - Data analysis and data visualisation
Java - Desktop and web development
PHP - Web development, Laravel Framework
Delphi - Desktop and business application development
asm - Understanding of x86 assembly

Data Access

SQLite - Mobile and desktop applications
PostgreSQL - Web applications
MySQL - Web applications
MongoDB - Web applications
Supabase - Backedn as Service

Dev Tools

Linux - Linux operating system
Docker - Docker containers for development and production
Vim/NeoVim - IDE/Code Editor, Plugin development
git - Version control, GitHub, GitLab

Frameworks and libraries

Express - JavaScript/TypeScript
NestJS - JavaScript/TypeScript
Laravel Framework - PHP
ReactJS - JavaScript/TypeScript
SolidJS - JavaScript/TypeScript
React Native - JavaScript/TypeScript

Embedded Systems

Atmel AVR - 8bit CPU
Microchip PIC - 8bit CPU
ESP32 - 32bit CPU
STM32 - 32bit ARM based CPU
Altera Cyclone IV - FPGA

Employment

Software Engineer, Self Employed

Freelance work mostly on web and mobile applications.

Technologies:

JavaScript/TypeScript
Node.js
Express
NestJS
React and React Native
SolidJS

2018-present

Embedded Software Engineer, Fiscal Solutions

Development of drivers for fiscal devices in ANSI C.
Maintain core system for fiscal service.
Design and develop framework for Lua integration for easier driver development.
Implement core functionality for HTTP requests.

2017-2018

Education

Novi Sad School of Business

BSc Applied in Economics

2018-present

ETŠ Mihajlo Pupin

High School degree in Mechatronics

2013-2017

Freelance Projects

DBT Search

Internal platform for DBT Search Title Company
Complex web application used for everyday work
Different roles for administrator, managers and employees
Used in every step of projects
Semi automated process of extracting informations from deeds
Microservice backend architecture
TypeScript, Node.js, Express, React, Redux, PostgreSQL

CH Salary

Salary and taxes calculator for Swiss market
Different roles for administrator, managers and employees
Microservice backend architecture
TypeScript, Node.js, Express, React, MobX, PostgreSQL

Glyco CH

Mobile application for calculating CarbonHydrate and Insulin units.
Premium features behind paywall
Available on Google Play and App Store
TypeScript, React Native, SQLite, MobX, Node.js, NestJS, MongoDB
<https://glyco-app.ch/>

School Diary

School management software
Different roles for administrator, secretary, teachers, parents and students
Different functionalities for each role
PHP, JavaScript, jQuery, MySQL

Fortis

Programmable Logic Controller
Firmware for stm32 microcontroller
Software for programming
C, C++, Embedded, Qt Framework

Heating Controller

Controller for central heating system.
The primary focus of the project was to provide efficient control for the heating system.
System based on AVR 8-bit microcontroller.
C, UART, SPI

Drink Inventory

Desktop application for drink inventory management and calculation.
Integration with digital scale and barcode scanner.
C++, Qt Framework

Personal Projects

Pedagogical Notebook

Mobile app for keeping student development records required by Serbian law
Currently in review process on Play Store
TypeScript, React Native, SQLite, MobX, Supabase
<https://pedagoskasveska.com/>

SIM800js

Node.js library for SIM800 module
Includes sending and receiving SMS functionalities
TypeScript, Serial Port, Promise
<https://www.npmjs.com/package/sim800js>

Node Serbian ID Card Reader

Node.js library for reading Serbian ID Cards
Supports only Windows OS due to official government driver limitations
Integrate existing C library into Node.js ecosystem
TypeScript
<https://www.npmjs.com/package/node-celik-api>

Smart Document Builder

Command line tool that allow user to convert documents from markdown into PDF and HTML
Shipped with predefined template for various type of documents.
Require Pandoc to be installed
JavaScript, CLI
<https://www.npmjs.com/package/smart-document-builder>

React Native Gradient Buttons

Buttons library for React Native
Based on similar library with extended functionality
TypeScript, ReactNative
<https://www.npmjs.com/package/react-native-gradient-buttons-improved>

Intepreter for Monkey programming language

Intepreter for Monkey programming language
Currently under development
TypeScript
<https://github.com/zivlakmilos/ts-monkey-interpreter>

Z8

8bit CPU design (powered by Altera Cyclong IV FPGA)
Assembly for Z8
Emulator for Z8
Currently under development
VHDL, C, TypeScript
<https://github.com/zivlakmilos/z8>

SonataJS

SonataJS is framework for web applications development
Currently under development
TypeScript, SolidJS, CLI
<https://github.com/sonatajs>

Projizi

Projizi is code generator for web applications
Generate migrations and basic UI starting point based on defined JSON
Deprecated, predecessor for SonataJS
<https://github.com/zivlakmmilos/projizi>

Led Display

Led Display powered with AVR microcontroller
Android app for controlling display over Bluetooth connection
Java, C
<https://github.com/zivlakmmilos/projizi>

Andnroid Quiz

Desktop application for quiz management (server)
Android application for contestants (client)
Desktop application shows questions on projector and teams compete with each other answering it on Android devices
Communication with server and client is handled using sockets
Java, Delphi, C++, Qt Framework

Robotic Arm

Robotic arm based on electro-pneumatic, PLC and Embedded Linux.
Library for Fatek communication protocol in C programming language.
Multi thread web service running on Raspberry Pi in C++ programming language
Control software for Desktop (C++, Qt Framework), Android (Java) and Web (JavaScript, Websockets)
<https://www.youtube.com/watch?v=VMeoHwQxMtg>

Zinux

Simple operating system for x86 platform.
Supports printing characters on display and handling keyboard and timer interrupts.
Written in C and Assembly.
<https://github.com/zivlakmilos/Zinux>