

Pawel Troka, PhD Eng

Lead Software Engineer

As an impassioned software engineering lead & architect, my journey is fueled by the sheer thrill of building innovative solutions. Specializing in C#, .NET, Python, scalable architectures, high-performance low-latency software solutions and Microsoft-related technologies, I channel my love for good software engineering into every project I touch. #hardwork #dedication #alwaysOnCall #performanceAsAFeature



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WORK EXPERIENCE

Tech Lead Axpo Group

06/2025 - Present

Baden, Switzerland (Remote)

- Leading a large, cross-functional team of software engineers, testers, and designers in developing high-performance trading algorithms and strategies for Axpo's cutting-edge MACH+ initiative
- Driving the success of Axpo's energy trading operations by architecting low-latency, market-beating systems that deliver a competitive edge in today's fast-moving energy markets

Senior Full Stack Developer Axpo Group

08/2024 - 05/2025

Baden, Switzerland (Remote)

- Leveraging deep experience in trading systems as an independent consultant to provide expert guidance on software engineering best practices

Lead Software Engineer Neutral Labs Inc.

03/2023 - 07/2024

New York, United States (Remote)

- Building, with a team of highly engaged individuals, first ever regenerative finance assets market ([Neutral exchange](#)) off-chain (CEX) with on-chain integrations on different blockchains
- Designing highly optimized algorithms for efficient semi-fungible assets trading, including sub-orderbooks matching
- Implementing, testing and deploying smart contracts such as [dynamic fee calculator](#) for Biochar on Polygon and Celo networks
- Tech: .NET 8 | C# | ASP.NET Web API | Go | Solidity | Microservices | Smart Contracts | Docker | Kubernetes | AWS | GitHub | ArgoCD | Forge | Foundry | MS SQL | Mongo DB | Redis | NATS | Polygon | Celo | Blockchain | OpenAI API | ChatGPT

Development Owner & Software Architect Value AS

02/2020 - 04/2023

Gdansk, Poland (Hybrid)

- Driving new software architecture [consolidating mergers and acquisitions](#) of other companies in energy trading and asset-based trading domain
- High performance Python and C# software development
- Managing a medium-sized team of developers, dev-ops and testers
- Tech: .NET 6 | C# | Python | PyPy | CPython | SignalR | Microservices | Docker | Kubernetes | Azure | AWS | AKS | Ubuntu | GitHub | Helm | flask | PyCharm | Aeron.NET | MemoryPack | UDP | SHM | RabbitMQ | Kafka | Prometheus | Grafana

SKILLS

C#

.NET

Python

ASP.NET Web API

Technical Leadership

Performance

Microservices

Software Architecture

Docker

Kubernetes

Web APIs

GitHub

Solidity

Algorithms

Smart Contracts

MS SQL

API Design

Software Craftsmanship

Trading Systems

Azure

AWS

Mongo DB

Redis

OpenAI

GPT

Regex

Monitoring

TRAITS

Hardworking

Dedicated

Precise

Likeable

Always available

Persistent

Highly driven

Super motivated

HONORS & AWARDS

Speaker at #137 TG-NET Meeting (11/2022)

TG.NET

► [#137 TG-NET Meeting | Meetup](#)

Speaker at Infoshare Conference (10/2022)

Infoshare

► [Aeron.NET - the fastest inter-process and inter-service messaging system on the planet - Agenda 2022 - Infoshare - The Biggest Tech Community in CEE](#)

Speaker at Scandinavian IT Night 3city (12/2018)

Scandinavian IT Night conference

► [Scandinavian IT Night 3city 2018 event](#)

Speaker at Smidig Skalerbarhet Nettverksmøte 2018 (06/2018)

Den norske dataforening

► [Smidig skalerbarhet - nettverksmøte](#)

Speaker at HACKER:SPACE meetup (03/2017)

HACKER:SPACE Tricity

Rector's Scholarship for the best students (01/2011)

Prof. Henryk Krawczyk, Rector of Gdansk University of Technology



WORK EXPERIENCE

Team Lead & Senior Software Engineer Powel AS

08/2017 – 03/2020

Gdansk, Poland

- Building cutting-edge microservices solution for algorithmic, automated, 24/7 [intraday energy trading](#), enabling energy traders to use Python to write their own trading strategies
- Managing a small team including representation on meetings with customers, setting priorities for tasks, filling-in responsibilities of a scrum master, being in charge of communication with management and customers
- Leading development of new features in a [co-creation process with the client](#)
- Tech: Python | flask | ECMAScript 6 | ReactJs | Cerebral | Docker | Kubernetes | PyCharm | Visual Studio Code | VSTS | Git | SQLite | .NET Core | ASP.NET Core | ASP.NET Core WebAPI | C# | F# | Microservices | Pandas | NumPy | SciPy

Software Engineer Powel AS

06/2016 – 09/2017

Gdansk, Poland

- Fixing bugs, developing new features in Powel ELIN project – an interoperable head-end meter data collection system that supports a wide range of meter types, terminals and concentrators
- Implementing web-services for energy sector, electric meters adapters development, Windows Server virtual machines and Oracle SQL database management, Visual Basic to C# conversion
- Tech: C# | .NET | WCF | NUnit | Moq | Unity | Powershell | MSBuild | Visual Studio | ASP.NET WebForms | WinForms | C++ | TeamCity | Git | Oracle | Angular

Research Assistant

The Szewalski Institute of Fluid-Flow Machinery,
Polish Academy of Sciences

09/2013 – 05/2024

Gdansk, Poland

- Blade Tip-Timing numerical algorithms development, numerical analysis, programming in C# on .NET platform using TPL, Fortran to C# translation
- Scientific data visualization using C#, WinForms, WPF, Python, NumPy, matplotlib



CERTIFICATES

Leadership development program (03/2021 – 11/2021)

execu.no, Markensgate 8, 4611 Kristiansand, Norway



EDUCATION

PhD degree in Mechanical Engineering

The Szewalski Institute of Fluid-Flow Machinery,
Polish Academy of Sciences

10/2016 – 02/2021

grade: with honors

Master's degree in Computer Science

Gdansk University of Technology

02/2015 – 11/2016

Engineer's degree in Computer Science

Gdansk University of Technology

09/2011 – 01/2015

Engineer's degree in Technical Physics

Gdansk University of Technology

09/2010 – 02/2014



LANGUAGES

Polish

Native or Bilingual Proficiency

English

Full Professional Proficiency

Norwegian

Elementary Proficiency

German

Elementary Proficiency



PROJECTS

TROKA.Software.SmartHome (01/2020 – Present)

► [Smart home automation project](#)

Computator.NET (10/2013 – Present)

► [Official app in the Microsoft Store](#)

- Open numerical software that is fast, easy to use, and competitive in features, supporting real, complex, and 3D function charts, advanced numerical calculations, elementary and special functions
- Tech: C# | .NET | WinForms | WPF | Desktop App Converter | ASP.NET Web API | MVP | Command pattern | Unity | NUnit | Moq | Math.NET | Accord.NET | InstallShield | Desktop | UWP | cake | Wix | Wix# | Travis | AppVeyor | Regex



PUBLICATIONS

Scientific paper

Nonsynchronous Rotor Blade Vibrations in Last Stage of 380 MW LP Steam Turbine at Various Condenser Pressures

2022-05-11

Applied Sciences

Scientific paper

New blade tip-timing system for measuring rotor blade vibration of steam and gas turbines

2019-12-16

XIV Research & Development in Power Engineering

Scientific paper

Tip-Timing Measurements and Numerical Analysis of Last-Stage Steam Turbine Mistuned Bladed Disc During Run-Down

2019-10-25

Journal of Vibration Engineering & Technologies

Scientific paper

Analysis of Middle Bearing Failure in Rotor Jet Engine Using Tip-Timing and RMS Technique

2016-02-01

Journal of Vibration Engineering & Technologies

Scientific paper

Rotor Blade Vibration Simulator of Steam Turbine with Aliasing Frequencies up to 25 Hz

2016-01-01

Transactions of the Institute of Fluid-Flow Machinery



SUPPORTED CAUSES

Wikipedia

Education

Science and Technology

Right to repair

Open source

Gender equality



INTERESTS

Software engineering

Bodybuilding

Investing

Sports

Travel

Home cinema

Smart home