

# ALEXANDER TSEMA

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## WORK EXPERIENCE

**Senior Full-stack Software Engineer | Team Leader – Purplebricks Inc.** New York, NY 7/17 – present

Architected and developed highly optimized, robust, scalable image processing pipeline for public facing website on-demand image resizing and compressing which reduced the Azure resources costs by 90%. Architected and implemented event-driven integration with CRM which aggregated data from various domains and sub-systems. Architected and implemented microservice for listing syndication with external portals which helped to stay in business with Zillow. Implemented a library-wrapper for CosmosDB which had all the boiler-plate machinery which can be used in a microservice to simplify dev story. Maintained MLS integration microservice with over 30 different boards across the US. Implemented React components for public facing website including forms, validators, and API clients. Optimized landing page to improve the performance and robustness. Created Grafana dashboards with alerts which helped to identify unusual behavior and gave developers enough time to react. Built a scrum team of 5 engineers. Mentored junior/mid engineers. (ASP.Net Core, C#, Python, Flask, Pillow, CosmosDB, MongoDB, SQL Server, EF, Typescript, NodeJS, React, Redux, nginx, Azure, Octopus, CI/CD, Docker, Grafana, Microservices, Messaging, Scrum, Git, TDD)

**Software Engineer – Department of Health and Mental Hygiene** New York, NY 8/16 – 6/17

Introduced innovative technologies and approaches of software development. Developed brand-new document flow automation system using microservices architecture which reduced maintenance costs and drastically improved user's performance. Developed the application for agent performance reports generation. Designed and developed dashboard of servers' performance. Maintained legacy Python services. Migrated environment from MongoDB version 2.6 to MongoDB version 3.4. Upgraded legacy applications to .Net Core. (ASP.Net, ASP.Net Core, C#, Python, Angular, JS, Typescript, MongoDB, SQL Server, TDD)

**Software Developer – MAYKOR** St Petersburg, Russia 5/14 – 7/15

Architected and took part in the implementation of the system for school automation: e-grades, building access control, cafeteria e-payments. Participated in designing and implementation system for postal services standalone software updates. Developed monolith application for Toyota vehicle factory and Aquaphor water filter factory. (ASP.Net MVC/Web API, C#, WCF, Python, JS, SQL Server, MongoDB, Git, TDD)

**Software Developer, Owner – OneTwoPrint** St Petersburg, Russia 10/14 – 3/15

Invented, designed and built a vending machine prototype (hardware & software) dedicated to printing photos from Instagram. Developed web portal for remote monitoring. (ASP.Net Web API, WPF, C#)

**Software Developer, Owner – AT Web Design Studio** St Petersburg, Russia 9/10 – 11/16

Provided a full cycle of software development for international clients. Worked on business processes automation, websites, web services, and desktop applications. (ASP.Net MVC/Web API, C#, WCF, WPF)

## EDUCATION

**MS Computer Science – The City College of New York** New York, NY 9/15 – 6/17

Graduation Project Work: "Scene Classification for Indoor Localization System"

**MS Software Engineering – ITMO University** St Petersburg, Russia 9/14 – 6/16

Graduation Thesis Work: "The Method of Face Features Recognition Using Neural Networks"

**BS Computer Science and Computer Engineering – ITMO University** St Petersburg, Russia 9/10 – 6/14

Graduation Thesis Work: "Pattern Recognition in Video Streams"

## ACTIVITIES

**Coauthor** of the book "Computer Vision for Assistive Healthcare" New York, NY 1/18

## INTERESTS

Computer Vision, AI, Machine Learning, Signal Processing.