# Artem Kustikov

Vienna ¤ Austria

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# Education

# Skills

Belarusian National Technical University Minsk, Belarus *1997-2002* 

Computer Science, Robotics

- JavaScript Full Stack: (2002-now), TypeScript, React/redux, Angular, Node.js, Expnress, Next.js, REST/GraphQL
- DevOps: (2015-now) Docker, Terraform, Kubernetes, AWS, Azure, GCP, Gitlab from till now
- **Python**: (2008-now) Django, Flask, FastAPI, SQLAlchemy, Celery, NumPy, Pandas, nltk, Seaborn, Pytorch, scikit-learn
- .NET: (2002-2016) ASP.NET, MVC, WCF/WPF/WinForms, SignalR, OWIN, Nancy, Unity, Entity Framework, Microsoft SharePoint
- C++: (2001-2018) MFC/COM/ATL, OpenGL, STL, boost, pthreads, networking, ActiveMQ
- Java: (2004-now) Java 1.3/21, Struts/FOP/JSTL/POI, JBoss, Tomcat, Spring Framework, Spring Boot, Quarkus, Gradle
- Go: (2018-2022) GRPC, protobuf, excelize
- Performed 500+ technical interviews in JavaScript, DevOps, .NET, and Golang

# Experience

# Aug 2022 - Current

Machine Learning Reply Vienna, Austria

Principal Consultant, AI/DevOps/FullStack Software Developer

## **Technologies**

- Nodejs, Typescript, React
- Java, Spring Boot, Quarkus, Gradle, Flyway
- PostgreSQL, MS SQL Server
- Apache Kafka, Flink, Redpanda, Confluent
- Azure: Kubernetes services, Service Bus, Monitor, SQL Databases, Cache for Redis, API Management
- AWS: CloudFormation, RDS, EC2, S3, EKS, CodeBuild/CodePipeline/CodeDeploy
- Terraform, Helm, Kubernetes, Docker

## **Projects**

Web-client for artificial intelligence chatbot system

- Implement pluggable AI models support, AWS Bedrock, Open AI. Client-side maintaining of miscellaneous AI models plugins like images processing, RAG, code interpretation.
- Introduce seamless users authentication and role-based authorization against AWS Cognito.

- Perform performance testing and source code quality review to guarantee excellent application performance, security and robustness.
- Develop robust and resilient CI/CD platform with integrated Unit Testing.
- Work on support of collaborative chats, workspaces, documents based on WebSockets and WebRTC.

Unified vehicles data streaming platform – Senior Java Developer/DevOps

- Work on backend microservices design, development, and deployment (Github Actions, ArgoCD, Azure Kubernetes Service, Terraform)
- Design and implement highly secured Java REST API on top of Confluent Kafka and Flink pipelines. Introduce NIST 8000 security framework requirements with automatic Confluence pages generation.
- Develop secured integration with external REST APIs for vehicle data providers with Azure SPN authentication

Online Sales Forecasting Tool – DevOps Engineer/Senior Developer

- Refactor existing microservices written on Java (Spring Boot), Python (FastAPI), and R (plumber) to support scaling in k8s. Optimize Docker images build and versioning, add health checks and external configuration. Develop CI/CD framework based on Github actions. Implement custom Github action to perform HTTP polling.
- Migrate legacy infrastructure from AWS (RDS and EC2 managed with CloudFormation) to private OpenShift cluster. Setup continuous deployment system based on Helm charts/templates and Tekton triggers and pipelines.

Cashier-free store backend/infrastructure – Full-Stack/DevOps

- Integrate external in-store computer vision system to supports customer's shopping journey. Integrate external payment providers: Fiserv, Adyen, PayPal. Design and implement custom whitelist system to block unsupported payment methods.
- Work on backend microservices deployment (Azure Kubernetes Service, Terraform, Helm) and performance issues, Elasticsearch integration and on-site analytics system development.
- Participate in backend microservices refactoring, implement distributed DB migrations k8s jobs system
  to avoid data modification and DB structure conflicts at parallel microservices deployments using initcontainers.
- Integrate Snyk Code and Snyk Container static application security testing into Azure DevOps CI pipeline.

May 2018 - Feb 2022

## **Intetics**

**Outstaff Software Development Company** 

Position: System Architect/Senior FullStack Software Developer

Worked on large b2b project in fashion industry evaluated as #1 on US Market. Participated in different integration tasks and custom ETL (extract, transform, load) engine development. Worked on migration of legacy frontend application from Ampersand. JS based framework to React JS.

Stack: Node.js (express, restify), ReactJS (TypeScript, redux, Ierna, grpc-web), Go lang (GRPC, protobuf), Threedium, Rust, Docker, Kubernetes, Google Cloud Platform, MongoDB, PostgreSQL, Bigtable

- Performed nodejs microservices profiling and code refactoring/optimization. Got about 90% minimization of synchronous code execution in public REST API implementation methods.
- Developed rich interactive UI for ETL tool with [React Flow] (https://reactflow.dev/), [dagre] (https://www.findbestopensource.com/product/dagrejs-dagre) and GRPC
- Designed and implemented Box.com and Dropbox connectors for ETL engine (Go lang)
- Worked on excelize library integration into ETL engine XSL processor (Go lang), fixed several issues in library code: https://github.com/gax-os/excelize/pulls?q=is%3Apr+is%3Amerged+artiz
- Worked on Threedium 3D models integration covering it with custom React component

Oct 2008 - May 2018

## **EffectiveSoft**

**Outsourcing Software Development Company** 

Position: System Architect/Senior Software Developer

Participated in 20+ projects including NLP and text mining tool Intellexer

## **Crowdfunding software**

b2b crowdfunding software to support local businesses with tight integration with Dwolla payments service

Stack: Node.js (express), React, AWS (EC2, ElacticBeanstalk, RDS, Route 53, CloudFront), webpack, jest, pdfkit, aws-sdk, AWS RDS (MySQL), Redis

## Tasks:

- Designed web client/admin app architecture
- Node.js background worker service to perform money transfers, apply interest charges and perform financial audit
- PDF notes generation with actual balance info
- Common UT system for client/server, CI setup (Bitbucket Pipelines)

## Online 360 deg video player/editor

Online video player/editor for interactive video presentations with 360deg/VR video support

Stack: Node.js (koa), Angular2, A-Frame, webpack, yarn, karma, Redis, MongoDB

## Tasks:

- Designed web/mobile app architecture
- Implemented custom video player Angular 2 component with 360deg/VR video support
- Designed Video streaming platform based on Amazon S3/CloudFront

## Microsoft Exchange integration software

Set of several e-mail archiving/processing software projects integrated with MS Exchange, MS Outlook, Veritas Enterprise Vault, and AWS

Stack: .NET (C#), ASP.NET MVC 5.0, Knockout.js, COM, MAPI, WinAPI

• Profiled and optimized custom Microsoft Compound File reader/writer based on MCDF (.NET)

• Designed and implemented rich UI features in admin web-project (ASP.NET MVC, knockout.js)

Symantec (Veritas) Enterprise Vault integration

Implementation of custom messages filter for Symantec (Veritas) Enterprise Vault that is used to pull and

transfer archived e-mail messages to ActiveMQ queue

Stack: C++14, COM, ActiveMQ

Tasks:

• Designed and implemented universal Enterprise Vault filter boilerplate in two versions: .NET(C#) and

C++

• Implemented mail messages processing, important message properties extraction and transfering of

parsed message data into ActiveMQ queue

**Set of Cordova applications** 

Development/optimization of several cross-platform mobile applications based on http://feedhenry.org/

technologies

Stack: node.js, Express, Backbone.js, Angular.js, redis, MongoDB

Tasks:

• Designed and implemented Cordova application to work with large amounts of tabular data on client

device (10-20 Mb of JSON). Designed custom async cache implementation that uses iOS file system

using Cordova plugins

Refactored mobile application architecture to use caching in localStorage/FileSystem and support

application offline mode with automatic network connection check

• Refactored backend REST API to use modular structure instead of all-stuff-in-one-file architecture.

Implemented REST API responses caching with Redis

Medicine: ECG files parsing and analysis

Stack: C#/Managed C++, Prism, Unity, WiX, SQLite

Tasks:

• Implemented new ECG formats files loading (Physionet, EFS, ISHNE, HL7)

• Refactored overall ECG files processing logic introducing universal data loader instead of set of

duplicate implementations

• Designed/implemented local ECG recordings database using SQLite engine

Online backup software

Development of several single-page applications to manage cloud online backup/big data storage.

Applications based on Ext.js 4.0 (migrated to 5.0)

Stack: Ext.js 4.0/5.0, SASS, Python, Robot Framework

- Implemented branded UI based on online CSS file generation and loading into client application
- Applied responsive layout to complex Ext.js application
- Extended legacy Ext.js SVG charts to support custom controls/tips/animation
- Worked on custom testing library for Robot Framework

# Development of public API for EffectiveSoft semantic product Intellexer, extending/optimization of legacy modules

Stack: .NET Framework 4.5, C# 4.0, WCF, REST, Windows-services, WiX Installer, Rhino.Mocks, NUnit, NAnt, DocX, LINQ, Spring framework, JavaScript, backbone.js, jqGrid, qunit

#### Tasks:

- Designed and implemented full-stack client-server application with single page JavaScript client and REST API on server
- Implemented set of WCF services to perform different semantic processing operations, API users/settings management
- Developed 20+ demo applications based on Twitter Bootsrap/backbone.js

## Medicine: DICOM files parsing and view

Stack: C++/MFC, C# 4.0, ASP.NET MVC 4, SignalR, jQuery/canvas/Twitter Bootsrap, MS SQL Server/MS Access

#### Tasks:

- Web-client to upload/view DICOM images converted to PNG on server-side (by C++ CGI). Web-client uses HTML canvas elements to display converted images and apply simple modifications to them: zoom, WL-transformation, interactive size measuring
- Optimize existing C++ CGI application to increase images generation performance and quality
- Developed multi-platform intranet clinic personal synchronization tool on ASP.NET MVC/SignalR
- Implemented company site using Twitter Bootstrap, integrated online licensing tool

# Investment orders management system

Position: Senior Developer

Stack: C# 4.0, ASP.NET MVC 2, Entity Framework/Migrations, AutoMapper, jQuery/jQuery UI/jQuery.jqGrid, PDFsharp-MigraDoc, LinqToCsv, DocumentFormat.OpenXml

#### Tasks:

- Developed basic application architecture, DAL and UI
- Implemented PDF/XLS reports generation
- Integration with Microgen 5 Series system

## Insurance technologies software

Position: Senior Developer

Team Size: 10

Stack: C# 4.0, ASP.NET MVC 2, JavaScript, jQuery, LINQ (Objects, SQL), TFS, MS Unit Test, Spring framework.

- Participated in migration of complex insurance software to new application framework.
- Developed several rich-UI Javascript controls to use in application framework.
- Developed NAnt script as part of continuous build on TFS server
- Worked on implementation of several new insurance products within system.

## **Document management integration system**

Position: Senior Developer

Team Size: 4

Stack: C# 4.0, ASP.NET MVC 2, JavaScript, jQuery, LINQ (Objects, SQL) with DBLinq, NUnit, Rhino.Mocks, Unity framework, SQLite, MS SQL Server

#### Tasks:

- Designed Web and Windows-service applications architecture.
- Developed MS SharePoint integration connector. Connector features: document libraries enumeration/deletion and creation; loading lists of folders/documents for each document library; documents download/upload and check-in/check-out; modification of document templates (add/remove/update fields).
- Developed SharePoint Web-Part to store custom document library settings.
- Developed base functionality of Web-application, UI features and DAL.
- Implemented Windows service to process synchronization tasks in background by user defined schedule using ThreadPool.

## Online book shop

Position: Senior Developer

Stack: PHP, Zend framework, Doctrine, jQuery, Python, sqlalchemy, subprocess, boto, PIL

### Tasks:

- Implemented set of books/ebooks information loading scripts implemented on Python. These scripts used to download products lists from books suppliers FTP servers in different formats, parse these files and insert/update products data in application database (MySQL).
- Refactored lots a legacy tools/modules to Zend MVC modules.
- Participated in performance optimization, implemented caching of business entities, optimized SQL queries

Oct 2006 - Oct 2008

InventionMachine - now IHS Markit

Innovation Software Development Company

Position: Software Developer

Technologies: .NET, C#, C++, ATL/MFC, JavaScript/AJAX, Java, ColdFusion

Worked on UI and SDK for GoldFire Innovator (Goldfire Cognitive Search)

Tasks:

 MS SharePoint Portal Connector to enumerate document libraries/folders and download documents/metadata from SharePoint storage using WSS SOAP web-services

 PTC Windchill Connector to enumerate containers and download documents/metadata from Windchill server using PTC Info\*Engine SOAP web-services

- Application internationalization/localization (support of Japanese/Korean languages)
- ASP.NET Rich UI controls
- WDDX support .NET library
- Migration of web-interface of document processing/indexing application from ColdFusion server to ASP.NET 2.0 (C#)

Jun 2004 - Sep 2006

#### **SCAND**

**Outsourcing Software Development Company** 

Position: Software Developer

Technologies: ASP 3.0 (VBScript), JavaScript/AJAX, C#, C++/boost/pthread, Java/Spring, MS SQL Server, Oracle

Participated in 5+ projects of different sizes

## Request management system for advertising company

Complex intranet corporation application written on ASP with own C++ components running at server and custom COM components (Automation). Worked with Business Objects, Microsoft Office Products from ASP code, application back-end – Oracle.

Stack: ASP 3.0, VBScript, HTML, AJAX, COM

#### Tasks:

- CSRF prevention module based on COM component to use it from ASP pages
- Documents parser that renders HTML preview for uploaded documents in different formats (MS Word 97, MS Excel 97, MS PowerPoint, ZIP archives and so on)
- Request Tracking module with rich UI (AJAX, DHTML)

## SEO engine with custom web-crawler

Cross-platform (Windows/Linux) server application for search engines optimization tasks:

- back-links analysis based on Google, Yahoo and MSN search results
- site-maps generation for selected domains
- web-pages analysis to parse page tags information (H1, H2, B, STRONG...), mata information, external objects from this page (CSS, images, external scripts) and so on
- Web-interface for server was implemented on PHP

Stack: C++ (gcc/MSVS); Sockets; boost; zlib; MySQL C++ API; pthread; TCP/IP, HTTP protocols

Dec 2002 - Jun 2004

Belarusian National Technical University

Location: Minsk, Belarus

Post-graduated student, teacher

Worked on robot simulation and analytical programming system – complex computer-aided modeling system for simulation of real industrial robots and their environment, calculation of robot kinematics, collision detection and analytical programming.

Also worked as teacher in the staff of BNTU and taught several IT-related courses: Computer Networking Fundamentals, Mathematical Fundamentals of Programming of Robots.

# Certifications

- May 2024: HashiCorp Certified: Terraform Associate (003)
- Oct 2023: AWS Certified Solutions Architect Associate
- Aug 2022: DevOps on AWS (Coursera)
- Apr 2017: Machine Learning and Data Analysis from MIPT/Yandex (Coursera).
- Sep 2016: Microsoft Certified Solutions Associate: Web Applications (Certification Number: F810-0741)
- Feb 2013: Microsoft Certified Solutions Developer: Web Applications

# **About**

## Languages

RU Russian (native) | GB English (full professional), IELTS 6.5, CEFR B2 | DE German (professional), OIF Integrationsprüfung B1

## Interests

Family | Hiking | Cooking | History