

Artem Arakcheev

Artificial Intelligence Architect

OVERVIEW

12+ years of successful experience in software development. Higher educated as Software Engineer (MCS). Expert in all phases of software development lifecycle: in specification of software requirements, software design, implementation, testing/debugging, integration, deployment/installation and maintenance. Developing Artificial Intelligence applications, Machine Learning and Deep Learning algorithms, Neural Network architectures, SaaS (full-stack), APIs, web services, applications, utilities, components, kernel modules, boot loaders, firmware and system software for multiple platforms. Using cloud computing, servers, desktops, tablets, mobiles and embedded systems. Excellent in integration of third-party APIs, payment processors, libraries and open source code. Responsibilities include providing innovative and cost-effective engineering solutions to meet technical objectives and timing. Works fine independently and in a team. Analytical, creative, critical and innovative thinker. Excellent communications skills. Able to work with clients directly. Consultant. SaaS startup co-founder. Winner of PayPal hackathon (Moscow, 2014). Interests are Artificial Intelligence, Quantum Computing, Brain-machine interfaces.

SKILLS

ARTIFICIAL INTELLIGENCE

- Learning approaches
 - Machine Learning, Deep Learning, Semi-supervised Learning
- Neural Networks
 - MLP, DNN, CNN, RNN, LSTM, GAN, Autoencoders
- Frameworks
 - TensorFlow, Keras
- Tools & Platforms
 - Python, Anaconda, Jupyter Notebook, Matplotlib, Numpy, Colaboratory, Kaggle
- Applications
 - Image Classification, Time Series Prediction, Sentiment Analysis, Text & Image & Music Generation, Game Playing, Planning
- Computer Vision
- Voice User Interfaces
- Natural Language Processing

VIDEO PLATFORMS

- Video capturing
- Video streaming
- Video processing, encoding, storing
- Tools
 - ffmpeg, mplayer, wowza, etc.

DATA FORMATS

- Video H.264, MPEG4, MJPEG, MSN3
- Image JPEG, PNG, SVG
- Audio MP3, WAV
- Data JSON, CSV, XML, YAML, Binary, Markdown, etc.

COMPUTING

- Cloud Computing
 - AWS (EC2, Lambda, S3, etc.), IBM Watson, RHCloud, Google Cloud Platform
- Hardware architectures
 - CPU/GPU, x86, MIPS32, ARM9, Arduino
- Internet Of Things (IOT)
 - WunderBar
- Operating systems
 - macOS, Linux, Windows

PROJECT MANAGEMENT

- Agile methodology
 - SCRUM, pair programming, etc.
- Team messaging
 - Slack, HipChat
- UML diagrams
 - PlantUML, Visio
- Issue-tracking systems
 - Jira, Mantis, Redmine, Redbooth

PROJECTS

WORKING PROJECTS

- Dashboard for Speech-To-Text platform
- Automatic speech recognition system
- TrafficProtector SaaS
- Cloud-based interactive media platform NPTV
- Web elections
- TV-broadcasting from Olympic games in Sochi, 2014
- Digital video recorders
 - Tral-1, Tral-3, Tral-5, Tral-7
- Automated parking access control
 - Tral-Parking

FULL STACK

- Programming languages
 - Python, Node.js, JavaScript (ES6/7), Lisp, C/C++, Objective-C, Bash scripting
- Backend development
 - Node.js, Swagger, MongoDB, SQL, noSQL, Redis, Express, Mocha, NgineX, 100+ npm modules
- Frontend development
 - React.js, JavaScript (ES6/7), HTML5, CSS3, Webpack, Gulp, NightWatch, Jest
- Payment processors
 - PayPal, Braintree
- API development
 - REST, OAuth2.0, JWT, WebHooks
- API integration
 - Auth0, Talkdesk, Zendesk, Loggly, Google (Safe Browsing, PageSpeed Insights), SendGrid, Twilio, Avast, YSlow, etc.
- Speech-to-Text integration
 - VoiceBase API
- Search & Analysis
 - ELK Stack, ElasticSearch
- Chat Bot development
 - Telegram, Facebook
- Testing environment
 - Test driven development (TDD), tests automation, manual testing
- Package management systems
 - Anaconda, Conda, NPM, PIP, Nix, Homebrew, dpkg, ipkg, RPM, sources
- Network protocols
 - HTTP(s), SSH, FTP, SSL, Web sockets, Ajax, CGI, TCP, UDP, SMTP, RTMP, RTP
- Messaging systems
 - ZeroMQ
- Deployment
 - PM2, Jenkins, Ansible
- Virtualization
 - Docker, VMWare Workstation, VirtualBox
- Version control systems
 - Git (Bitbucket, GitHub), SVN, CVS
- Sniffers
 - Charles, Wireshark
- Code editors and IDEs
 - Vim, Emacs, Sublime, Eclipse

EMBEDDED SYSTEMS

- Linux development
 - user applications, kernel modules, client-server, multi-threading, cross-compilation, Shell, Gcc, CLang, Dbg, Makefile, etc.
- Linux firmware for embedded systems
 - OpenEmbedded, BitBake, Busybox
- Boot loaders
 - RedBoot, U-Boot

STUDYING PROJECTS

- Sudoku AI solver
- AI Game-Playing Agent
- Planning Search
- Sign Language Recognizer
- Video Object Classifier (dog breed)
- Time Series Predictor (stock prices)
- Text Generation
- Machine Translation

WINNER OF PAYPAL HACKATHON

Moscow, 2014
Smart Skateboard IOT

PERSONAL INFO

WEBSITE

[alphara.github.io](https://github.com/alphara)

GITHUB

github.com/alphara

LINKEDIN

linkedin.com/in/artem-arakcheev

EMAIL

artarakcheev@gmail.com

PHONE

+55 (21) 96967-6369

EXPERIENCE

CONSULTANT @ VOICEBASE

San Francisco, CA, USA [remotely]

A key contributor to: 1) dashboard of speech-to-text platform; 2) automatic speech recognition system. Consulted CTO, Director Engineering, teams of developers, devOps and Q&A. Recommended new team members and approaches in software engineering. Designed, developed, tested platform across a full-stack. Reviewed, refactored, improved code of team members. Organized continuous integration, deployment and delivery. Released minimum viable product. Scaled the product for small and medium business. Used AWS cloud computing (EC2, S3, Lambda, etc.). Researched integrations with third-party APIs. Integrated the platform with single sign-on providers. Integrated the service into Talkdesk, Zendesk, Salesforce platforms.

November 2017

CTO, CO-FOUNDER @ TRAFFIC PROTECTOR

Bali Indonesia [remotely]

Executed design, development, testing, deployment and support of SaaS startup. Coordinated engineering of a highly effective web service that offers to web site owners a security level and instant notifications with website health status, traffic counters, speed and UI improvements. Managed an IT team with developers, designers, devOps and other members. Designed UI and API. Built backend and frontend. Programmed REST API. Reviewed and improved code of developers. Integrated payment processors. Integrated third party APIs. Used test-driven development. Deployed and scaled the web service. Produced technical documentation. Created step-by-step tutorial. Informed clients with newsletters. Coached and supported customers. Demonstrated the SaaS on Affiliate World Conference, Berlin, 2016.

October 2016

LEAD DEVELOPER @ NPTV, DIGITAL OCTOBER

Moscow, Russia

Developed next-generation cloud-based digital TV-video platform. Guided design and development of a framework for video broadcasting, processing, capturing, etc. Released framework-based applications for interacting with users and media broadcasting through networks. Created automated tests. Tested and debugged the framework and audio platform. Investigated, prepared and analyzed video samples (mp4, h.264, rtmp, raw, etc.). Wrote technical documentation. Participated in projects Web Elections and TV-broadcasting from Olympic games in Sochi, 2014.

December 2014

EMBEDDED SYSTEMS ENGINEER @ SMP-SERVICE

Zelenograd, Russia

Developed 4 generations of digital video recorders Tral. Engineered and released 200+ firmwares for embedded systems. Evaluated, scheduled and performed software development with team of developers and testers. Projected video streaming. Designed communication protocols and data storage formats. Built applications for video capturing, encoding, processing, data storing, configuration, email sending. Developed Linux-kernel modules for video ADC / DAC, audio, watchdog, serial port, buttons, LEDs, etc. Created and improved Linux-tools, apps, scripts, configurations. Improved code of boot loaders. Integrated GPS-receivers, ABOX security controllers, GPRS / EDGE / 3G-modems to DVRs. Tested and debugged software and hardware. Wrote technical documentation. Created SDK.

October 2013

C/C++ DEVELOPER @ RESEARCH INSTITUTE (MIET)

Zelengorad, Russia

Developed software for micro controllers firmware installation. Designed communication protocol. Executed debugging and testing. Wrote technical documentation.

February 2006

EDUCATION

ARTIFICIAL INTELLIGENCE ENGINEER @ UDACITY

Online education

July 2017

SOFTWARE ENGINEER @ NATIONAL RESEARCH UNIVERSITY OF ELECTRONIC TECHNOLOGY

Zelengorad, Russia

- Master in Computer Science (MSc) degree equivalent.
- Program 220400 «The Software of Computer facilities and the Automated Systems».
- Courses: marketing basics, basics of electrical engineering and circuit theory, engineering and computer graphics, fundamentals of metrology, cybersecurity, numerical methods, software and automated systems
- Capstone project "development of digital video recorder"

July 2007

September 2002

