IGOR NOVIKOV

Senior AI/ML engineer, architect

Over 4 years in AI development and more than 18 years in system, desktop, and web software development across various programming languages and operating systems.

EDUCATION

Bachelor of Science in Information Technology, Computer Science

TECH STACK

Languages
Python, JavaScript

Frameworks
TensorFlow, PyTorch, SciKit-learn

AI Models
GPT, BERT, Claude, Llama

Tools
LangChain

EXPERTISE

- Large Language Models
- Langchain
- Llama Index
- Anthropic
- OpenAI
- Langsmith
- Multi-modal Models
- Fine-tuning
- Machine Learning Algorithms

WORK EXPERIENCE

AI developer, Architect
December 2023 – present

Medical information extraction project
The client is an AI consulting company operating in the healthcare niche. The client required an AI/LLM tool to extract critical information from medical records, and the project needed to be completed within tight deadlines.

Personal results:
- I have designed the architecture of the app, led the team, and developed it myself. The team has successfully completed the app, focusing on Biomarkers, Stage, Grade, and Histologic diagnosis, processing records in the Hebrew language.
- The app was designed to operate on-premises, without internet connectivity, and with minimal hardware requirements. The implementation involved a two-step process: initially leveraging a large language model (LLM), followed by fine-tuned, trained models for enhanced precision.

Investment analysis project
The company supports asset allocators and other investors with secure Generative AI and GraphAI-based solutions for private market fund manager diligence and evaluation. The client required software designed to significantly reduce the time analysts spend reading fund descriptions, presentations, and financial data.

Personal results:
- I have designed the architecture of the app, led the team, and developed it myself. I've developed an LLM-driven solution tailored for private markets, focusing on analyzing a specific range of documents in various formats and producing personalized content for users.
- The software for financial and investment analysts ingests a set of documents in various formats and generates customized financial documents, tables, reports, and diagrams. The program supports a history of changes (with undo/redo functionality), and a native chat interface, answering user questions about the financial data and generating document sections upon natural language request.

Machine Learning Specialization, DeepLearning.AI
Stanford University, 2023

Pattern Discovery for Data Mining
University of Illinois at Urbana-Champaign, 2015

LANGUAGES

English
Proficient, CEFR C2 certificate

Spanish
Basic/Pre-Intermediate, A2

WORK EXPERIENCE

- The app uses multiple Anthropic agents, complex workflows, and multi-step prompting with Langchain and LCEL.

EVA chatbot
The client is a major real estate company in Dubai. The client needed to automate communication between brokers and leads (cold and warm leads) on WhatsApp, automate the bot's communication using a sales script, and add functionality for automatically scheduling meetings between human brokers and clients.

Personal results:
- I have designed the architecture of the app and led the team of Account Manager, Data Scientist, Python developer, and QA.
- I've led the development of a WhatsApp bot that finds luxury real estate properties that meet clients' requirements, clarifies details, and arranges meetings with brokers.
- During the project, the team focused on the human-like behavior of the bot, conducting several parallel experiments on the bot's manner of communication, adherence to the script, and more.

A pricing optimization platform for retailers and manufacturers
The client is a major retailer of household and computer equipment.

Personal results:
- I have designed the architecture of the app, led the team and developed it myself.
- I've developed a ML pipeline that incorporates neural networks and manages the optimization process: ingesting company historical pricing data, and predicting parameters that influence the pricing of goods, by categories. The pipeline generates predictions for different time periods.

Reliablesite.net
Server management platform, PXE/DHCP server, server monitoring software

Personal results:
- I have planned the technical architecture.
- I have provided technical consulting for development and management teams.
- I have developed an AI chatbot (llama.cpp, Llama-2).
- I have developed meeting summarization engine development (GPT-4, whisper).

Kaduu AG
Software Architect, Lead Software Developer, Co-Founder
August 2018 – February 2023

Online threat monitoring platform. Website: kaduu.io

WORK EXPERIENCE

Personal results:
- I have designed the Software architecture.
- I have managed an R&D team (up to 10 members).
- I have managed the project.
- I have developed the software using Java, Spring, Python, Elasticsearch, and Cassandra.

Accumatic LLC
Team Lead
February 2020 – January 2023

Building various software systems using Python, Node.js and AI/ML

Personal results:
- Software architecture design for document management and search systems for car dealerships for the US market
- Technical roadmap planning

Infinit LLC
Software   Architect,   Lead   Software   Developer
January 2014 – February 2020

Consulting company. Mostly building software in healthcare space for various clients

Personal results:
- Software architecture design.
- Team management (up to 10 members in the team)
- Project management
- Software development: Valant HRM, Amwell concierge module

Stellarbit LLC
Business Owner, Lead Software Developer
January 2014 – December 2017

The company is engaged in software development, software outsourcing, and IT consulting. Its products and services:
- Server management platform, PXE/DHCP server, server monitoring software – reliablesite.net
- CD2 Learning – e-learning platform
- Software development
- IT consulting
- Security audit
- Website/server stress-tests

Personal results:
- Business management, Accounting
- Team management (up to 5 members in team)

WORK EXPERIENCE

- Project management
- Software development

Atlantis, Ltd
Chief Technical Officer, Lead Developer
June 2013 – June 2014

Software and hardware development company.

Personal results:
- Developers team management (up to 4 developers in the team)
- Software development of a Kiosk for quick loans in cash and a Kiosk for car insurance.

Self-Employed Software Developer
April 2010 – June 2013

Software development on freelance websites and for local companies, without official employment

Personal results:
- Software development of kiosks, kiosk hardware (cash dispensers, bill acceptors, etc.), and web-services.

Akvelon Ltd
Software developer, Consulting
October 2009 – March 2010

High-load system for legal document management developed in C#

Personal results:
- Software development

MX1, Ltd
Software developer, Lead developer
April 2008 – April 2009

Software development company

Personal results:
- Developers team management (up to 2 developers in the team)
- Software development of an online trading platform for local businesses, and an online business directory website

Self-Employed Software Developer
April 2007 – April 2008

Software development on freelance websites and for local companies, without official employment

WORK EXPERIENCE

Personal results:
- Software development of Search engine scraping platform and Software protection utility.

Matrix, Ltd
Software developer, Lead developer
October 2006 – March 2007

Website development & hosting company

Personal results:
- Developers team management (up to 2 developers in team)
- Website Content Management System development
- Search engine optimization software development

CLC TechDataSolutions, Ltd
Junior Systems Administrator, Software Developer
January 2006 – October 2006

Recruitment agency: staff recruitment, staff outsourcing, recruitment consulting

Personal results:
- Computer network management
- Website code management, fixes, and improvements
- Website search engine optimization