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Alex Fedotov

Data Scientist / Data Engineer

About Me I'm looking for a stable data related full-time or part-time 1099 or W2 position in Chicago, IL or 100 percent remote. It can be an established business or a start-up environment. All in all I have 42 years of experience with data, 45 years of experience in programming, 38 years of experience with databases (there were pretty much none before that) 30 years with 'neural networks'. I created several successful companies but I've finished my business career and am working with data now (again).

Green Card holder, full work authorization in the US.

Education

1973 - 1979, Moscow State University (Moscow, USSR)

Ph.D. in Physics and Mathematics, Plasma Physics

Experience

May 2020 - present, Chief Data Scientist, Independent Contractor at mobile games company with 12 successful titles

Detailed achievements in the present position:

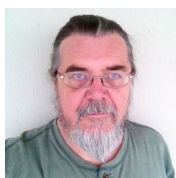
- Developed a mathematical foundation for the analysis of Correlated Sequences, implemented the code and models, tested it on standard data sets and achieved state of the art or higher results (trade secret of the company);
- Launched on the Company infrastructure the Ax.dev Experimentation Platform for Bayesian Optimization, (developed by Meta platforms (former facebook) Inc.) and conducted numerous online, online-offline and multi-objective experiments with modifications of Company's games. On this setup conducted 'interventions' (collection of counterfactual data) on models in order to find causal relationships and achieve explainability. The micro-service is built on FastAPI, APScheduler, asyncio and uses Airflow as a secondary sub-service;
- Set up and used the AWS infrastructure of the Company (SageMaker Studio, SageMaker, Athena, Glue) for Machine learning;
- Implemented (Athena, SQL, Dask) multiple data extraction pipelines from a petabyte size Data Warehouse of the company to the datasets that were used by me for machine learning;
- Acquired a hands-on experience of working with, AWS RedShift because the main DWH of the company is built on it.

The company maintains around a dozen serverless mobile games utilizing AWS Kinesis and other AWS services with several million of active users each.

January 2017 - April 2020, Data Scientist, Independent Contractor

Detailed achievements in the past position:

- Collected, scraped from the web, filtered out, enriched, cleaned up, verified, reformatted and made accessible as Leads data for a mid-size real-estate related business in a half a year long project;
- Acquired a hands-on experience of administration of Azure, AWS and Google Cloud Platform / Services while doing all that.



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Nov. 2003 - Dec. 2016, *President, On-line Card Technologies, Inc. (Chicago, IL)*

Managed the design and development team of ON-LINE CARDTM - standalone digital ID / payments processing / billing web-service.

Feb. 2002 - Jan. 2004, *Owner, CEO, ROBOXchange.com*

Fully automated e-currency exchange service. Led the design and development, built a business around it and managed the continuous support and development of the service, including the financial management and partnerships with all e-money services that existed at the time.

Sep. 1999 - Oct. 2003, *Co-owner, CEO, Guarantee Agency, JSC (Moscow, Russia)*

Led the product design team and product implementation team of the first direct-access online exchange INDX.ru (still operates). The exchange traded derivative direct-lending instruments for e-money (webmoney.ru); devised the contracts that were traded on the exchange and added several important features to the e-money system itself. Tools: SQL.

March. 1995 - Aug. 1999, *President, CEO, A.V. Fedotov and Co. (Moscow, Russia)*

Licensed commodities futures brokerage firm, accredited with MICEX (Moscow). Devised and implemented a futures trading system based on composite indicators and Bayesian neural network. Tools: METASTOCK, Neurostock, Excel script, Visual Basic.

March. 1995 - Aug. 1999, *CEO, LYNX, Inc. (Moscow, Russia)*

Research and development company that engineered and patented an Erbium medical laser for blood sampling (scarificator).

April. 1979 - Jan. 1992, *Junior Research Associate - Research Associate, Lebedev Physical Institute of the Academy of Science (Moscow, Russia)*

Physical experiments and experiment automation on high-power relativistic electron beam accelerator. Skills: PDP 8 and 11, Apple II, IBM PC, DEC VAX, CAMAC (Computer-Aided Measurement And Control), Tools: Assembler, Focal/Fortran, Pascal/Modula, C/C++ ...

Communication Skills

Between 1992 and 2011

I founded, funded and managed 5 companies. This required some communication skills.

Software Development Skills

Programming

- Python
- PyCharm
- bash
- git/GitHub/GitLab
- R
- RStudio

Computer Software

- SQL
- NoSQL(MongoDB)
- DWH(RedShift)

Interests

Professional

Mathematics of Machine Learning, Measurement Theory, Probability Theories, Inductive, Empirical and Causal Inference, advanced programming techniques.