
ANDRII PROKHORENKOV

Principal Software Engineer

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Principal Software Engineer with a decade of experience and an MSc in Physics. Multidisciplinary background blending software development, user-centered design, and advanced mathematical skills. Proficient in Python/Go, with expertise in system and scientific programming across on-prem and cloud platforms (AWS, Azure). Proven impact in organizations ranging from startups to 150+ member teams in developing and delivering business and science projects.

HIGHLIGHTS

- Focus on user-experience and user-satisfaction and extensive attention to details.
- Experience with Kanban, Scrum, XP, and other techniques enabling agility.
- Experience leading project team to achieve technical excellence in feature and product development.
- Polyglot software engineer with experience in Python, Go, C++, C#, R, Wolfram Mathematica and MATLAB; and interest in Elixir and Rust.

WORK EXPERIENCE

Principal Software Engineer

Sep 2021 – present

University of Chicago

Technical leader, mentor and software engineer of Gen3 – product for scalable data platform for scientific research; with microservice architecture; with a Python/Go/Node.js backend; React/Next.js frontend; built and deployed on AWS. Additional responsibilities for multiple projects and team members.

- Led two pivotal software project, guiding two teams of 2 and 4 engineers for timely and quality outcome.
- Developed more than a dozen platform features, ensuring timely and high-quality cross-project delivery.
- Implemented support of multi-TB dataset of clinical data in OMOP CDM data model with a data lake approach.
- Owned an implementation of a GWAS (genome-wide association study) workflow with support of parallel workflows with 100s of nodes and 10s of 1000s pod in Kubernetes.
- Leveraged modern technologies to streamline ETL process for imaging data with monthly submissions of over 200 GB and 1'000'000s of files.
- Integrated multiple open-source tools (like OHIF Viewer, Orthanc, OHDSI Atlas, multiple Apache projects, etc) in a seamless manner and established best practices to ensure continuous updates and robust security.
- Contributed to recruitment, assisting in candidate evaluations.

Senior Software Engineer

Aug 2018 – Aug 2021

University of Chicago

Software engineer contributing to Gen3 software.

- Led the team of two engineers, provided technical support, guidelines and planning for programming projects.
- Established ETL standards and implementation to streamline getting COVID-19 data from multiple sources and ensure consistent data model in a data lake approach.
- Owned an implementation of initial version of PFB (Portable Format for Biomedical Data) – format for efficient transfer and storage of clinical and biomedical data.
- Increased test coverage from 10% to 60% for the ETL through implementing unit and acceptance testing and developing and maintaining tools to generate sample data sets.

Data Scientist

Mar 2018 – Aug 2018

CollectiveCrunch

Building and maintaining data-driven software for forestry and energy companies.

- Developing and maintaining analytical platform with machine learning backend of LSTM neural networks.
- Owned deployment and development of a service for running pretrained neural network models on Azure.
- Extending neural network models with data from various data sources, including Blob storage and Postgres.

Data Engineer

Jan 2017 – Jan 2018

XroadMedia

Built the data analysis platform presented at the IBC 2017.

- Owned development of real-time analysis platform for logs supporting 1000s of requests/s for daily, weekly and monthly metrics.
- Implemented deployment of on-prem multi-node Elasticsearch-Logstash-Kibana cluster with Docker Swarm.
- Established and implement best practices on creating Grafana visualization dashboards with custom Lucene and Painless queries to Elasticsearch backend.
- Modernized and maintained custom Grafana panels for multi-series metrics (ratio of total, summary by days, etc).

Python Data Processing Developer

Jun 2016 – Jan 2017

Genesys

Engineer to support and maintain multiple data heavy software projects with MySQL, SQL Server and S3 for the data.

Data Scientist

Oct 2015 – May 2016

Devographics

Built a framework for economics data analysis in R and Java integration with Elasticsearch and Postgres as a data storage and deployed on AWS.

Data Scientist

Jun 2012 – Oct 2016

Freelance

Project-oriented Data Scientist with over 20 successful mid-term projects, focused on Python, R and C#.

EDUCATION

Taras Shevchenko National University of Kyiv

Sep 2012 – Jun 2014

Master of Science (M.S.) in Physics

Taras Shevchenko National University of Kyiv

Sep 2008 – Jun 2012

Bachelor of Science (B.S.) in Physics