

Abay Akturin

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EDUCATION

New York University

December 2021

M.S. Computer Engineering

New York City, New York

The Ohio State University

May 2018

B.S. Chemical Engineering

Columbus, Ohio

SKILLS

- **Languages:** Python, C++, Go, JavaScript/TypeScript, Java, C#, Swift.
- **Technologies & Frameworks:** Django, PyTorch, Tensorflow, MongoDB, PostgreSQL, PySpark, Docker, Git, Jupyter.

PROFESSIONAL EXPERIENCE

ByteDance Inc. (TikTok)

January 2022 - Present

Software Engineer | Python, Go, PySpark, Hive, Docker

Mountain View, California

- Designed and implemented, using a Golang gRPC framework, a part of a new machine learning infrastructure for producing calibrated ads conversions from the TikTok app.
- Refactored the code and optimized the Spark settings to speed up the data pipelines by 34%.
- Maintained the key parts of the team's machine learning infrastructure.

ByteDance Inc. (TikTok)

May 2021 - August 2021

Machine Learning Engineer Intern | Python, Go, PySpark, Hive, Docker

New York City, New York

- Built ML infrastructure for generating 160 model ranking features from 2TB+ of advertisement data.
- Conducted data analysis on 8TB of advertisement data and explored the correlation between features and user purchases.
- Created a technical document on the internal ML platforms and tools that collected 137 unique views, was shared across 5 teams, and has been included in the corporate Wiki.

Flex

October 2018 - April 2019

Process Engineer | Python, MySQL, Django

Austin, Texas

- Designed a data pipeline using Python and SQL to automatically generate reports on manufacturing projects.
- Raised the manufacturing production rate by 15% for the Hewlett Packard Enterprise manufacturing process.
- Supervised 20 manufacturing technicians and 3 production lines with an estimated released product total value of \$1.5M USD after 3 months.

PROJECTS

NeuralProtect

Neural Network Backdoor Trojan Attack Detection | Tensorflow, YouTube API, SciPy

- Designed a STRIP-based backdoor detector against trojan attacks and trained it on the YouTube Face dataset.
- Achieved an attack success rate with the minimum of 93.5% for targeted attacks and 81.32% for untargeted attacks.
- **Cybersecurity Prize for Greater Good at NYUWeekly Hackathon 2020.**

Memorize

Card game for iOS | Swift, iOS

- Completed a project from Stanford's online course in iOS development and added my own features
- Memorize cards, match them, and alternate between different themes

INVOLVEMENT

Engineers for Outreach

June 2020 - May 2021

Vice President of Activities

New York University

- Provided mentorship for students studying in developing countries interested in technical opportunities.
- Presented online lectures on new technologies and frameworks for audiences of 50+ students in Kazakhstan.
- Organized and participated in tech-related events, hackathons, and socials.