

# ARTUR KASHPERSKIY

## Software Engineer

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sm5art



## EXPERIENCE

### Software Engineer

#### Autodesk

Sept 2022 – Dec 2023

San Francisco, CA

- Developed infrastructure for user profile platform across Autodesk products, focusing on authentication and authorization at profile.autodesk.com.
- Implemented Observability dashboards and alarms on AWS Cloudwatch and Splunk to monitor latencies, errors, and call counts for user profile API services. Improved and standardized logging on all services and operations and updated documentation/runbooks with the team on monitoring of services.
- Worked with team to optimize infrastructure and internal libraries, reducing API latency from 1.5s to an average of 0.3s, while enhancing API functionality. Implemented rate-limiting on all of our services for improved stability and performance. Enhanced Redis cache and HTTPS client libraries and usage in services through rigorous environment testing.
- GraphQL, Node.js, Serverless, AWS (SQS, S3, Lambda, DynamoDB, Kinesis, Cloudwatch), Redis, Terraform, Splunk, PagerDuty, Dynatrace.

### Software Engineer Intern

#### Autodesk

June 2021 – September 2021

San Rafael, CA

- Worked with User Profile team to build front end for new landing page for when users first hit profile.autodesk.com (to manage a users profile).
- Worked with designers to build a few reusable React components and microfrontend that supports fast loading of the new landing page. Learned JS technologies for localization, GraphQL queries and microfrontend routing.
- GraphQL, React, Jenkins, Node.js, Dynatrace, Adobe AEM, Figma

### Software Engineer Intern

#### Valravn Capital

January 2021 – March 2021

NY, Remote

- Built up new infrastructure and helped team with moving and consolidating some fundamental macroeconomic data fetching processes for research purpose to new Airflow infrastructure to help reduce costs spent on AWS.
- Built an experimental fintech full stack web application for optimizing and simulating many different portfolios with different exposure options using Plotly Dash.
- Apache Airflow, Python, AWS EC2, AWS SageMaker, Plotly Dash

### Software Engineer Intern

#### Heali.ai

July 2019 – October 2019

Santa Monica, CA

- Built APIs with Express.js and serverless to support feature for mobile app showing diet and nutrition information when scanning food product barcodes with camera.
- Built front end functionality for food product barcode scanning with Swift native OCR plugins in React Native App.
- Added some new infrastructure for bug reporting (Phabricator) and integrated it with a shake to bug report frontend feature to the app.

## SKILLS

Python JavaScript Java C C++  
C# MATLAB React GraphQL React Native  
Docker pytorch tensorflow langchain  
chromadb postgres MongoDB AWS EC2  
API Gateway Lambda S3 MariaDB  
Redis Memcached Terraform

## PROJECTS

### demix

- Developed a web tool enabling music producers to upload audio files and receive individually separated vocals and instrumental tracks, leveraging machine learning for remixing instead of manual equalization. Launched on AWS EC2 and Docker for 2 months, achieving 8000 weekly active users before shutdown due to high costs.
- python flask server, GatsbyJS frontend, TensorFlow.
- <https://github.com/sm5art/demix>
- <https://github.com/sm5art/demix-frontend>

### genetic pong

- Added an AI to a friend's pong game in Python using the pygame package by implementing a genetic algorithm from scratch. This algorithm utilized an unsupervised fitness heuristic to optimize the performance of the pong "brain". Training took approximately 30 minutes or 30 generations to converge, resulting in the creation of an unbeatable AI player.
- python, numpy, pygame
- YouTube Training Demo
- <https://github.com/sm5art/genetic-pong>

### recipedb

- Built an LLM based application that scrapes popular recipe blog hosts for recipes and gets relevant information such as ingredient/title and helps recommend recipes to the user based on their preferences.
- Used OpenAI ChatGPT APIs for parsing web text for valid recipe information and stored in MongoDB.
- Utilized TFIDF vectorizer models to help find related recipes to recommend to the user.
- python, MongoDB, OpenAI GPT, remix/React JS, langchain, transformers (huggingface) Microsoft phi-2 (2B)

- React Native, serverless, nodeJS, Apache Phabricator, AWS, Swift

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## Software Engineer Intern

### Nipun Capital

📅 June 2017 – September 2017      📍 Foster City, CA

- Built up data pipeline for alpha generation and web scraping sources in emerging markets (exchange sites) using python and Apache Airflow (one job required to break old text capchas using CNNs). Moved old alpha generation cronjobs to new Airflow infrastructure.
- Worked on a small NLP research project investigating sentiment analysis of conference call transcripts (financial sentiment dictionary and word2vec methods) and backtested using internal tools.
- python, Google Cloud, Apache Airflow, tensorflow

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## Software Engineer Intern

### Minted

📅 June 2016 – August 2016      📍 San Francisco, CA

- Wrote unit/integration tests improving coverage of marketing insert logic in Minted fulfillment state machine and fixed bugs.
- Built an API endpoint and front end for an analytics dashboard used as a productivity tracking tool for our stationary design auditing team.
- BackboneJS/ReactJS, Python, MySQL, Vagrant, puppeteer, SQLAlchemy

## EDUCATION

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### B.S. in Applied Physics

#### University of Washington

📅 Sep 2017 - Mar 2023      📍 Seattle, WA

**Notable coursework:** Algorithms and Data Structures, Vector Calculus/Complex Analysis, Probability I, Artificial Intelligence, MATLAB for Numerical Analysis, Quantum Mechanics, Digital/Analog Electronics

**Clubs:** Algorithmic Trading Club @ UW, Game Dev Club @ UW, Washington Esports