Artur Kashperskiy
Software Engineer

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LinkedIn
GitHub
portfolio site

EDUCATION

University of Washington, Seattle, WA | *B.S. in Applied Physics* **2017-2023**

- Cumulative GPA: 3.3
- **Notable coursework:** Algorithms and Data Structures, Vector Calculus/Complex Analysis, Probability I, Artificial Intelligence, MATLAB for Numerical Analysis, Quantum Mechanics, Digital/Analog Electronics, Advanced Physics Lab: Condensed Matter Physics
- **Clubs:** Algorithmic Trading Club @ UW, Game Dev Club @ UW, Washington Esports

EXPERIENCE

Nipun Capital **San Francisco, CA**
Software Engineer *Mar 2024 – Current*

- Working on software contracts related to building data pipelines for various companies using LLM frameworks/various ML models to parse PDF reports into structured outputs for programmatic text ingestion.
- Technologies: python, OpenAI, langchain, various DB technologies, Tesseract OCR

Autodesk **San Francisco, CA**
Software Engineer *Sept 2022 – Dec 2023*

- Developed cross-product user profile infrastructure with focus on authentication and authorization (profile.autodesk.com).
- Implemented AWS Cloudwatch and Splunk observability dashboards and alarms to monitor API services; standardized logging and updated documentation/runbooks.
- Optimized infrastructure and internal libraries, reducing API latency from 1.5s to 0.3s; implemented rate-limiting, enhanced Redis cache, and improved HTTPS client libraries.
- Technologies: GraphQL, Node.js, Serverless, AWS (SQS, S3, Lambda, DynamoDB, Kinesis, Cloudwatch), Redis, Terraform, Splunk, PagerDuty, Dynatrace, jenkins.

Software Engineer Intern *Jun 2021 – Sept 2021*

- 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, nodeJS, Dynatrace, Adobe AEM, Figma

Valravn Capital **NY, Remote**
Software Engineer Intern *Jan 2021 – Mar 2021*

- 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

Heali.ai **Santa Monica, CA**
Software Engineer Intern *Jul 2019 – Oct 2019*

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

Nipun Capital **Foster City, CA**
Software Engineer Intern *Jun 2017 – Sept 2017*

- 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

Minted **San Francisco, CA**
Software Engineer Intern *Jun 2016 – Aug 2016*

- 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

SKILLS & INTERESTS

Technical Python, JavaScript, Java, C, C++, C#, MATLAB, React, GraphQL, React Native, Docker, pytorch, tensorflow, airflow, langchain, chromadb, postgres, MongoDB, AWS EC2, API Gateway, Lambda, S3, MariaDB, Redis, Memcached, Terraform, Kubernetes, git, GPT/LLM

General Software Engineering/Development, Software/Hardware Architecture, Version Control, CI/CD Automations, AI/ML

Language English, Spanish, Ukrainian, Russian

Laboratory Physics Electronics Labs, Advanced Physics Lab: Condensed Matter Physics

PROJECTS

demix | *https://github.com/sm5art/demix* 2020

- 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 | *https://github.com/sm5art/genetic-pong* 2019

- 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
- Blog Post