

VINOGRADOV SERGEY

Software and ML developer

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Dolgoprudny, Russia

BiscuitsLayer



EXPERIENCE

Computer Vision Engineer

UBO Group

- Oct. 2024 – Ongoing Moscow, Russia
- Developed face-recognition module with FAISS database
- Implemented various filters and algorithms to improve recognition accuracy
- Developed multi-threading approach for main processing pipeline
- Fine-tuning NN models for segmentation and tracking

Backend Developer

ScaleGen AI

- Oct. 2023 – Oct. 2024 Mumbai, India (remote)
- Developed API Gateway setup pipelines using AWS and GCP
- Developed billing service and price estimation for various cloud computing instances
- Responsible for main CLI project (built in Python)
- Added on-prem support and networking for main project

Graphics Engineer

Huawei

- July 2021 – Oct. 2023 Moscow, Russia
- Built ground-truth raytracer to verify approximations for main project
- Improved Vulkan API validation layers for main project
- Added shaders for different materials processing in PBR algorithms
- Responsible for CI/CD tool for mobile devices testing and performance measurements

EDUCATION

School of Data Analysis, Department of Innovation and High Technology, MIPT + Yandex

Ongoing

- Sept. 2023 – Ongoing Dolgoprudny, Russia
- Major in Data Science
- CUDA, CV (2D and 3D), Self-Driving cars, MLOps and DevOps courses
- Participated in mobile development and AI hackathons
- Developed a startup for travellers for efficient route building using AI
- Diploma on the topic "Neural rendering for self-driving car sensor simulation"

Department of Radio Engineering and Cybernetics, MIPT

Diploma with honors

- Sept. 2019 – Aug. 2023 Dolgoprudny, Russia
- Major in Mathematics and Computer Science
- Mostly involved in compiler and architecture simulator development
- Diploma on the topic "Mesh Simplification using algorithms and GNNs"

TECH SKILLS

- Math/Linear Algebra
- Probability and statistics
- Physics and Theoretical mechanics
- Algorithms
- Multithreading/Concurrency
- ML/DL
- Computer Vision
- NLP
- Reinforcement Learning
- Self-Driving Cars

SOFTWARE SKILLS

- C/C++
- Assembly
- Python
- Dart/Flutter
- Docker
- Ansible
- Linux
- Gitlab CI
- OpenGL/Vulkan
- RenderDoc
- OpenCL
- CUDA
- ROS2
- CMake/Make
- Clang/LLVM IR
- PyTorch/LibTorch/PyTorch Lightning
- OpenCV
- GGML
- Numpy/Scipy
- AWS/GCP/Datacrunch
- Nginx
- Prometheus
- Grafana/Loki/Promtail
- Swagger/Fast API

PROJECTS

SmartTravel

- An application to build efficient routes for travellers, based on reviews and suggestions
- Flutter/Dart, Kotlin, Swift, Travelling services APIs (TripAdvisor/KudaGo/Yandex Maps)

SmartCarProject

- OpenGL based self-driving car simulator using RL and CV + real-life remote RC-car control via Arduino with Bluetooth module + Aruco marker based localization in ROS2
- C++, OpenGL, Assimp, LibTorch, Q-Learning, Arduino, ROS2

Scheme language with LLVM IR Generator

- Raytracer on self-made functional programming language with LLVM IR Frontend and C++/OpenGL Backend
- C/C++, Google Test, GNU Bison, GNU Flex, LLVM IR, OpenGL

LANGUAGES

Russian (native)
English (C1)
German (A2)

