# VINOGRADOV SERGEY

**Software and ML developer**

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vk.com/biscuitslayer

## EXPERIENCE

### Middle Backend Developer
**Scalegen AI**

📅 Oct. 2023 – Ongoing       📍 Mumbai, India (remote)

- Developed API Gateway creation/deletion/cleanup pipelines using Amazon Web Services and Google Cloud Platform
- Developed billing service and price estimation for various AWS, GCP computing instances
- Responsible for main CLI project (built in Python)
- Did research in Llama2 and NLP transformers structure

### Graphics Engineer
**Huawei**

📅 July 2021 – Oct. 2023       📍 Moscow, Russia

- Built ground-truth raytracer to verify approximation results in a main graphics project
- Improved Vulkan API validation layers for main project
- Added shaders for different material properties processing in Physical Based rendering algorithms
- Responsible for Gitlab CI with testing on mobile devices and performance measurements

## EDUCATION

### Department of Innovation and High Technology, MIPT
**Ongoing**

📅 Sept. 2023 – Ongoing       📍 Dolgoprudny, Russia

- Major in Data Science
- Participated in mobile development and AI hackathons
- Algorithms, DevOps and MLOps courses, Linux and Hadoop courses

### School of Data Analysis, Yandex
**Ongoing**

📅 Sept. 2023 – Ongoing       📍 Moscow, Russia

- Major in Data Science
- Successfully passed NLP, CV and Self-Driving cars courses
- Developed a startup for travellers for efficient route building using AI

### 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 · OpenCL/CUDA · Assimp · Unreal Engine · RenderDoc · SmartPerf · CMake/Make · Clang/LLVM IR · Google Test · GNU Bison/Flex · PyTorch/LibTorch/PyTorch Lightning · OpenCV · GGML · Numpy/Scipy · AWS/GCP/Datacrunch · Nginx · Prometheus · Grafana/Loki/Promtail · Swagger/Platform 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)

### SmartCar
- OpenGL based simulation of a drone with lidar installed, using ray tracing technology, reinforcement learning and computer vision
- C++, OpenGL, Assimp, LibTorch, Q-Learning

### 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)**