Atlanta, Georgia, US
koshelev@gatech.edu
+1 404 409 47 34

# Denis Koshelev

linkedin.com/in/deniskoshelev
github.com/kshpdr
koshelev.works

## Technologies and Languages

**Languages**:    Python, JavaScript, Java, C++, Go, PHP, Ruby, C
**Technologies**:    React, Rails, Symfony, Flask, MySQL, Postgres, AWS, Google Cloud, Git, Jenkins, Ansible
**Other**:    Web application development, shell scripting, API design, database implementation, unit testing

## Education

**Georgia Institute of Technology,** M.Sc. Computer Science                                    Aug 2023 – expected May 2025
GPA 4.0/4.0, full-ride scholarship for graduate studies                                                                Atlanta, US
*Specialization: Computing Systems/Machine Learning*
*Coursework: High-Performance Parallel Programming, Deep Learning, Advanced OS*

**Technical University of Berlin**, B.Sc. Computer Science                                          Oct 2020 – Aug 2023
GPA 3.6/4.0, the #2 ranked university for Computer Science in the country                       Berlin, Germany
*Coursework: Algorithm Engineering, Distributed System Prototyping, Computer Graphics*

## Work Experience

**Amazon Web Services**                                                                                           May 2024 – Aug 2024
Software Engineer Intern                                                                                              Cupertino, CA, US

- Designed and implemented architecture to retrieve and process telemetry data from an S3 bucket with 1M+ entries per hardware ID, reducing retrieval time by 43%.
- Developed an algorithm to match telemetry data with tag data using time and fault error correlation, achieving 95%+ matching accuracy.
- Implemented dynamic, asynchronous data fetching via Amazon Athena for 10M+ entries, improving response time by 70% for attribute sets.
- Built the front-end of a new portal tab, streamlining data visualization and interaction for fleet maintenance.

**CHECK24 Vergleichsportal**                                                                                   Oct 2022 – Jul 2023
Software Engineer Intern                                                                                                Berlin, Germany

- Reduced data retrieval times with a 30% speed-up by implementing backend API endpoints, optimizing user information exchange between three core services
- Decreased onboarding time by 15% by building a documentation portal for 6 projects, serving 40+ engineers, that updated on-the-fly according to OpenAPI specs
- Increased an average session duration by 20% by implementing 10+ interactive frontend pages
- Enhanced analytics by integrating user tracking on all pages, capturing 10,000+ users

**FRAUNHOFER INSTITUTE**                                                                                       Nov 2021 – Sep 2022
Software Developer Intern                                                                                               Berlin, Germany

- Increased content variety by 35% by designing new API endpoints, connecting 100+ content provider services
- Increased content accessibility by 25% by transforming metadata formats for 20+ providers
- Reduced datastream latency by 40% by implementing Selenium-based automated testing for mobile devices

## Selected Projects

[howisgt.life](howisgt.life) — A mood-meter for Georgia Tech campus based on sentiment analysis                Oct 2024
Flask, React, PostgreSQL, Terraform

- Developed a custom heuristic-based sentiment analysis model that outperformed Claude Sonnet 3.5 by 26%, validated through comprehensive human feedback
- Implemented an efficient polling mechanism to aggregate data from Reddit, enabling real-time sentiment analysis
- Delivered a fully functional MVP within a 10-hour timeframe during the AI ATL hackathon

[FedMart](FedMart) — A federated marketplace toolkit for integration of microservice-based shops                Aug 2023
Go, React, PostgreSQL, Docker, Google Kubernetes Engine

- Achieved a 90% on-time project completion rate by leading a 7-member squad, ensuring efficient task delegation
- Increased building and deployment time by 70% by dockerizing the toolkit and deploying it on GKE
- Developed a universal protocol for connecting any microservice-based shop, resulting in the seamless integration and exchange of item information with two established open-source shops

[FindBotel](FindBotel) — A holiday booking system within your favorite messenger                Aug 2022
Python, pyTelegramBotAPI, Flask, AWS

- Implemented in 2 weeks a search engine for a scholarship challenge for computer science students (awarded)
- Optimized search over the large dataset (15GB+, 100+ million entries) from 104 seconds to 0.0025 seconds by integrating BTree indexing, optimizing the SQL operator usage, and improving data formatting
- Integrated telegram payment API for direct purchase of the package holiday

[MTS](MTS) — A catalog of modules at the Technical University of Berlin in Telegram bot                Nov 2021
Python, pyTelegramBotAPI, BeautifulSoup, PostgreSQL

- Enhanced catalog accessibility by developing a parser, seamlessly managing 10,000+ modules
- Attracted 100+ active users in the initial month, marking a 20% month-on-month growth rate
- Introduced an in-house review and feedback mechanism to collect insights about individual modules

## Achievements

- **Naumann-Etienne Scholarship**: Full Scholarship for graduate studies at Georgia Tech          Dec 2022 – Present
- **Amazon Mentorship Program**: Highly competitive mentorship program          Feb 2023 – May 2024
- **German National Scholarship**: Issued by The Federal Government and private sponsors          Oct 2022 – Nov 2023
- **GenDev Scholarship CHECK24**: Issued by Check24 for talented computer science students          Oct 2022 – Sep 2023

## Others

- **Selected as a judge for HackMIT**, the largest undergraduate hackathon in the U.S.          Sept 2024