Anatolii Kmetiuk

Senior Software & Systems Engineer

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Expertise

Technical Domains
- **Backend Development** — 10 years.
- **ML & Deep Learning** — 7 years.
- **Compiler Engineering** — 5 years.

Soft Skills
- **Technical Leadership** — 5 years.
- **Community Building** — 5 years.
- **Strategic Communication** — 5 years.
- **Project Management** — 3 years.

Languages
- **Ukrainian and Russian**: native bilingual proficiency.
- **English**: native bilingual proficiency.
- **Japanese**: intermediate (N3).
- **French**: intermediate (A2).

Languages & Technologies

Technical Stack
- **Scala** (Cats, ZIO, Akka, Play, Spark) — 10 years
- **Python** (TensorFlow, Keras, PyTorch) — 7 years
- **Elixir** — 1 year
- **Javascript** (Typescript, NextJS, React) — 3 years
- **Infrastructure** (Git, Docker, Kubernetes, GitHub Actions, GCP, AWS, Azure) — 10 years
- **SQL** — 10 years

Work Experience

Jan 2022 - Apr 2024

⚙ **Developer Relations Manager**, 🏛 *Scala Center, EPFL*, 📍 Lausanne, Switzerland.
</> **Scala 3, Python, Infrastructure**

Scala Center is a non-profit organization that supports the Scala programming language and its ecosystem.
- **Scala 3 Compiler Contributor** - Contributed critical fixes and features.
- **Chairperson, Scala Improvement Process** - Oversaw language evolution lifecycle.
- **Compiler Release Manager** - Managed release cycles and maintained CI/CD pipelines.
- **Fundraising** - Secured investments through partner relationship-building.
- **Mentor** - Mentored students and new contributors.
- **Global Community Development** – Organized Scala-focused events worldwide.
- **Business Process Optimization** – Implemented improvements that streamlined internal processes.

Apr 2019 -
Jan 2022
⚙ **Compiler Engineer**, 🏛 *LAMP, EPFL*, 📍 Lausanne, Switzerland.
</> **Scala 3, Scala.js, Infrastructure**
LAMP is a research lab developing the Scala programming language.
- **Core Language Development** - Designed and implemented Scala 3 compiler's core functionality.
- **Ecosystem Migration** - Led the migration of major Scala libraries to Scala 3.
- **Release Engineering** - Established release protocols, orcestrated the first Scala 3 release.
- **Community Development** - Created the Compiler Academy program, onboarding 80+ contributors to compiler development.
- **Infrastructure** - Modernized the CI/CD pipeline using GitHub Actions and Docker for improved stability.
- **Technical Leadership** - Mentored 8 students through compiler-related semester projects.

Sept 2018 -
Jan 2019
⚙ **Software Engineer**, 🏛 *Secure Code Warrior*.
</> **Scala, Play Framework, Cats, PostgreSQL, Docker**
Secure Code Warrior is a company providing a platform for learning security through practical exercises.
- **Platform Development** - Built 25 interactive security training applications using the Typelevel stack.
- **Curriculum Design** - Created OWASP Top 10 learning paths with practical exploitation exercises.
- **Framework Architecture** - Developed a framework that reduced challenge creation time from days to hours.

Jun - Jul
2018
⚙ **Conversation Systems AI Engineer**, 🏛 *Botelz*.
</> **Scala, Spark, Akka, Cats, Python, Tensorflow, Keras, Stanford NLP, IBM Watson, Postgres SQL, Docker**
Botelz was a hospitality startup developing an AI-powered customer service platform.
- **NLP Pipeline** - Built a natural language processing system with 90
- **Integration** - Developed a chatbot API scaling to 1000+ daily queries across multiple platforms.
- **Analytics** - Created a system for tracking and improving response accuracy through machine learning.

Oct 2017 -
May 2018
⚙ **Web Application Engineer**, 🏛 *Zoteca, Inc.*.
</> **Scala.js, Cats, Akka, Play Framework, PostgreSQL, Docker, Azure**
Zoteca is a consultancy developing a booking and inventory management system for popup stores.
- **Full-Stack Development** - Built an e-commerce platform using Scala.js and Typelevel stack.
- **Real-Time Features** - Implemented a real-time appointment booking and management system.

Oct 2017 -
Nov 2017
⚙ **Data Scientist**, 🏛 *Indalyz Monitoring & Prognostics GmbH*.
</> **Scala, Spark, Akka, Cats, Python, Keras, TensorFlow, PostgreSQL, Docker**

- **ETL** - Built end-to-end ETL pipeline using Scala, Spark and PostgreSQL.
- **Deep Learning** - Developed LSTM-based fraud detection with 92% accuracy using 100+ features.
- **Infrastructure** - Created containerized deployment solution using Docker.

Sept 2016 -
Dec 2016
⚙ **Data Scientist**, 🏛 *Sparse.Tech*.
</> **Scala, Spark, Akka, Cats, Python, Keras, TensorFlow, PostgreSQL, Docker**
Sparse.Tech is a consultancy developing deep learning solutions for industrial applications.
- **Deep Learning** - Built neural networks achieving 87
- **ETL** - Created systems scaling to processing millions of social media posts daily.

Oct 2015 -
Jan 2017
⚙ **Software Engineer**, 🏛 *Delftware Technology BV*.
</> **Scala, Parser Combinators**
Delftware Technology BV is a Scala consultancy company developing an application for generating presentations from templates.
- **Template Engine** - Built a flexible PowerPoint presentation generation system.
- **Integration** - Created support for multiple data sources including YAML, XML, and JSON.

Apr 2015 - Feb 2016	⚙ **Compiler Engineer**, 🏛 *Delftware Technology BV*, ⓠ scala-subscript/subscript. **</> Scala, Parser Combinators, Akka, sbt, Java** Delftware Technology BV is a Scala consultancy company developing an application for generating presentations from templates. ○ **Compiler Engineering** - Created process algebra syntax integrated with Scala's type system. ○ **Tooling Engineering** - Built parser and compiler integration with Scala via SBT and macros. ○ **Research** - Published paper in International Symposium on Functional and Logic Programming.
Jun 2014 - Aug 2014	⚙ **Google Summer of Code Intern**, 🏛 *Scala Team, EPFL*. **</> Scala, Akka, sbt, Java** Scala Team at EPFL is a research team developing the Scala programming language. ○ **Integration** - Connected SubScript process algebra with Akka actor model library.

Publications and Educational Materials

2022	▶ How to Read the Dotty Codebase ⚲ https://youtu.be/XsxcaE29AN4
2018	▤ Mastering Functional Programming 🏛 Packt Publishing ⚲ https://goo.gl/wEsCFL
2017	▤ A Story of One Library: Introduction to Functional Architectures ⚲ https://shorturl.at/CGQU7 ▶ Introduction to Type Classes ⚲ https://youtu.be/XsxcaE29AN4
2016	▥ van Delft, Andre, and Anatoliy Kmetyuk. "Declarative Programming with Algebra." International Symposium on Functional and Logic Programming. Springer International Publishing, 2016. ⚲ https://goo.gl/T6FlxP

Education

Apr 2024 - Present	🏛 **ISI Japanese Language Career Academy**, 📍 *Tokyo, Japan*, 🎓 Japanese Language Studies.
Feb 2021 - Dec 2021	🏛 **InnoSuisse at EPFL**, 📍 *Lausanne, Switzerland*, 🎓 Impact Entrepreneurship Bootcamp.
Sept 2011 - May 2017	🏛 **National University "Odessa Law Academy"**, 📍 *Odessa, Ukraine*, 🎓 MSc of Law.