Michael Prutkow

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Expected graduation: Summer 2028

EDUCATION

Technical University of Munich *Oct. 2025 – Summer 2028 (exp.)*
B.Sc. Computer Science, minor in Economics | ***GPA 1.8*** *(German scale, 1.0 = best)* *Munich, Germany*

- **Scholar, Studienstiftung des deutschen Volkes**, Germany's most selective merit scholarship
- **Current coursework**: **Deep Learning** (graduate level), Databases, Operating Systems, IT Security, Analysis, Economics, Business Administration, Entrepreneurship
- **Coursework**: Linear Algebra, Discrete Structures, Algorithms & Data Structures, Computer Architecture

Wilhelm-Gymnasium Hamburg *Sep. 2017 – Jul. 2025*
*Abitur, final grade **1.0**, the best possible grade (**top 3% nationally**)* *Hamburg, Germany*

- **Advanced courses**: Mathematics, Physics, Political Science, English

EXPERIENCE

Anki for Claude | GitHub | Python, Model Context Protocol *Aug. 2026 – Present*
*Open-source Claude plugin with **16 MCP tools, 5 skills and 4 subagents*** *Munich, Germany*

- Built a **Python MCP server** and Claude plugin that turns lecture slides, recordings and past exams into Anki flashcards, including **figures cropped from PDFs**, Graphviz diagrams and **image occlusion**
- Built an **evaluation harness** for the agent: **end-to-end evals** with LLM-as-judge and **tool-call graders**, plus **pytest** for every tool
- Routed subagents to models by difficulty to cut **cost and latency** (**Haiku** audits, **Sonnet** analyses, **Opus** draws diagrams)
- Designed an **orchestrator-worker pipeline** with **isolated subagent contexts**: one analyst per source, up to five writers **in parallel** and an auditor that checks every card against explicit quality rules
- Gated every write behind **deterministic validation** (note schema, duplicates, LaTeX and cloze syntax) and **human-in-the-loop approval**, with an **append-only journal** for one-call rollback
- Shipped it via its own plugin marketplace and **submitted it to Anthropic's official plugin directory**

High-Performance Fractal Renderer | C11, SIMD, Multithreading *May 2026 – Aug. 2026*
*TUM computer architecture lab, team of three, graded **1.0** (58.75/60)* *Munich, Germany*

- Cut render time from 1.07 s to 11.8 ms (**90x**) on a **64-core AMD EPYC** server through algorithmic tuning, **SIMD** and **multithreading**
- Verified every speedup with the **median of 16 runs** over six sessions and **byte-identical** output against a reference implementation

Exam Generator | GitHub | Java 21, Gemini API, LaTeX *Jul. 2026 – Aug. 2026*
Open-source tool that turns past exams into new practice exams with worked solutions *Munich, Germany*

- **Verified** every generated solution: accepted only if independent model runs, **blind to the stored answer**, re-derived it **unanimously**

Mathematics Tutor *2024 – Present*
Self-employed *Hamburg / Munich, Germany*

- Tutor students in advanced mathematics and study techniques with individual learning plans

SKILLS

- **LLM systems:** tool calling (MCP), structured outputs, multi-agent orchestration, context engineering, evals
- **Machine learning:** PyTorch, NumPy; rebuilt Karpathy's *Zero to Hero* from scratch (autograd, backprop, GPT)
- **Programming: Python**, C, Java, OCaml, SQL
- **Tools:** Git, Linux, Docker, uv, pytest, GitHub Actions, Gradle, JUnit 5, Spring Boot, Valgrind and sanitizers
- **Languages:** German (native), English (C1), Russian (fluent), French (B1), Latin (Großes Latinum)

AWARDS AND LEADERSHIP

- **DPG Abitur Prize 2025** from the German Physical Society for outstanding achievement in physics
- Published a market analysis of a **voice-AI startup** through the *FAZ Jugend & Wirtschaft* programme
- Elected **student body representative** (Schülersprecher); *Jugend debattiert*; *Jugend im Parlament* (Hamburg)