Andrzej Pomirski

Staff AI/ML Engineer • Agentic AI, LLMs & Speech Technology

Gdańsk, Poland • pomirski.com
github.com/Acrobot • linkedin.com/in/andrzej-pomirski

Summary

AI/ML engineer with over a decade of experience across speech technology and, more recently, agentic AI. At Amazon (2015–2024, Senior SDE) I led on-device text-to-speech — the offline neural voices shipping in BMW and MINI cars, the TTS engine behind Kindle e-readers, Amazon Lockers and Fire tablets, and higher-quality voices for Alexa. At Panasonic I was primary developer of the conversational AI behind Umi (a family wellness coach) at Panasonic Well, then moved with the KanpAI platform to Global Applied AI for core platform engineering and forward-deployed customer delivery, including AIVA (demoed at Aircraft Interiors Expo). I also co-author peer-reviewed research in speech synthesis, sign-language generation and computer vision, with current work on EEG-to-text decoding.

Experience

Panasonic (US) Remote • Palo Alto, CA (USA)
Staff AI/ML Engineer | Forward-Deployed Engineer — Global Applied AI *Oct 2025 – Jul 2026*

- Built the core of **KanpAI** (Panasonic's enterprise agent platform) — the SDK and orchestration engine behind every agent built on it — as one of its first engineers and its second-largest contributor overall.
- As a forward-deployed engineer, worked directly with other Panasonic operating companies — gathering requirements first-hand and iterating toward solutions that fit each business, amid shifting and often ambiguous goals.
- Built **AIVA**, Panasonic's AI in-flight assistant for Avionics Astrova seat-back units (KanpAI-powered, with avatar, voice and layover planning), demoed at Aircraft Interiors Expo to airline customers.
- Delivered agentic prototypes, several demoed to company executives — a manufacturing production-forecasting agent and an on-site widget that predicts a visitor's likely path and guides them toward conversion in real time, driven by a gradient-boosted purchase-intent model I trained end-to-end ($\sim$0.95 AUC, $\sim$80$\times$ lift on its top-ranked leads).
- Worked across several KanpAI teams to speed up delivery when needed — contributing to its evaluation framework, CLI, low-code agent builder and developer tooling.

Tech: Python, TypeScript, React, Dart/Flutter, FastAPI, gRPC, PostgreSQL, Redis, Kafka, LiteLLM, BigQuery, WebRTC, KanpAI, LLMs (OpenAI, Anthropic, Llama), MCP, AWS

Staff AI/ML Engineer — Panasonic Well *Apr 2024 – Oct 2025*

- Primary developer and top contributor to the AI layer of **Umi**, Panasonic Well's LLM-powered family wellness coach — built its multi-agent conversational AI from scratch to coordinate goals, scheduling and recommendations across a family, and took it through internal dogfooding and trusted-tester programs with real families.
- Built the shared agent libraries beneath Umi and reusable service/agent templates adopted across the team.
- Collaborated directly with **Anthropic** engineers during a strategic partnership.

Tech: Python, LLMs (OpenAI, Anthropic), agent orchestration, gRPC, Pydantic

Amazon Gdańsk, PL • Cambridge, UK
Senior Software Development Engineer *Jun 2015 – Jun 2024*

- Promoted through four levels, from intern to Senior Software Development Engineer (Senior from 2022).
- Built the core of a pioneering, fully offline neural text-to-speech system shipping in **BMW and MINI**, each with its own sub-150 MB English voice, running at roughly twice real-time with under 200 ms to first audio on Pixel 4 XL-class hardware.
- Tech lead of the on-device TTS team (later Neural TTS on Device).
- Developed and improved the on-device TTS engine powering Kindle e-readers, Amazon Lockers, Fire tablets and Echo Show, and delivered higher-quality voices for **Alexa**.
- Created the initial **Amazon Polly** iOS SDK; as a Lab126 intern in Cambridge, developed a network- and condition-aware test system for **Amazon Cloud Cam**.
- Mentored engineers to promotion and advised master's students on three published papers through the Amazon–UPM/IPTC collaboration.

Tech: C, C++, Java, Python, Perl, Bash, Git, TensorFlow, PyTorch

Skills

- **Programming:** Python, C, C++, Java, TypeScript, Dart/Flutter, Bash
- **AI/ML:** LLMs & agents (OpenAI, Anthropic, open-source), multi-agent systems, MCP, RAG, structured outputs; deep learning (PyTorch, TensorFlow), gradient-boosted models (LightGBM); Transformers, CNNs; text-to-speech (TTS)
- **Platform & infra:** Linux, AWS, Docker, gRPC, CI/CD, Datadog, Git

Education

Gdańsk University of Technology Gdańsk, Poland
Master of Engineering & Bachelor of Engineering in Computer Science — BEng with distinction *2015 – 2020*

- MEng thesis: *Deep Learning Methods for Spoken Language Identification* (2020) — doi:10.5281/zenodo.17692661.
- BEng thesis: *Machine Learning for Road-Surface Quality Classification from Mobile-Device Accelerometers* (2019).

Publications

1. M. Gil-Martín, M. Villa-Monedero, **A. Pomirski**, D. Sáez-Trigueros, R. San-Segundo. "Sign Language Motion Generation from Sign Characteristics." *Sensors* 23(23):9365, 2023. doi:10.3390/s23239365
2. M. Villa-Monedero, M. Gil-Martín, D. Sáez-Trigueros, **A. Pomirski**, R. San-Segundo. "Sign Language Dataset for Automatic Motion Generation." *Journal of Imaging* 9(12):262, 2023. doi:10.3390/jimaging9120262
3. A. D. Dobrzycki, A. M. Bernardos, L. Bergesio, **A. Pomirski**, D. Sáez-Trigueros. "Exploring the Use of Contrastive Language-Image Pre-Training for Human Posture Classification: Insights from Yoga Pose Analysis." *Mathematics* 12(1):76, 2023. doi:10.3390/math12010076
4. B. Tura Vecino, A. Gabrys, D. Matwicki, **A. Pomirski**, T. Iddon, M. Cotescu, J. Lorenzo-Trueba. "Lightweight End-to-End Text-to-Speech Synthesis for Low-Resource On-Device Applications." *12th ISCA Speech Synthesis Workshop (SSW)*, 2023. doi:10.21437/ssw.2023-35
5. **A. Pomirski**, R. San-Segundo, R. Barra-Chicote. "Contrastive Learning for EEG-to-Text Generation: A Vocabulary-Consistent Evaluation on the ZuCo Datasets." *In preparation*, 2026.

Awards & Honors

- **Gold Badge of the Graduate of Gdańsk University of Technology** — for graduating with distinction, 2019.
- **NASA International Space Apps Challenge** — Global Award Nominee (2017) and Local People's Choice Winner (2018).

Open Source & Outreach

- **ChestShop** — open-source Minecraft server plugin (Java), **5M+ downloads**.
- Invited as an Amazon speaker on the *Technofobia* podcast, discussing AI trends.

Languages & Interests

Polish (native) • English (C2 — Certificate of Proficiency, grade A)

Interests: gliding (glider pilot licence), motorsport, 3D printing, travelling, video games