Alexander Metzger

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EXPERIENCE

Koel Labs – *Founder and CEO* — Aug. 2024 – Present
- **Raised $100K in funding**: from Mozilla, Next, and partners for computational linguistics research.
- **First authoring**: ML and HCI papers, leading team of 3, training SoTA models with PyTorch.
- **Python**: MLOps, Docker, Google Cloud Platform, Azure, AWS, React, NLP, ML for Audio, Streaming.

Ubiquitous Computing Lab – *Undergraduate Researcher* — Jun. 2024 – Present
- **Co-authored**: the SAMIR research paper by leading the data collection effort for 1000s of products, inventing the Computer Vision pipeline, designing the UI, and running extensive evaluations.
- **Python**: Embedded ML, ML for Sustainability, Computer Vision, Vision Language Models.

Seattle Tutoring Partners – *Founder and Research Mentor* — May. 2022 – Present
- **Mentoring research projects for High Schoolers**: notably a CISG approved clinical study of the effectiveness of digital concussion assessments for student athletes
- **Developed**: software for 500+ youth musicians and antenna software for 8K+ aspiring scientists.
- **Cascade Enrichment, Technical Lead**: managing remote certification and coding curriculum for 30+ tutors; developing and maintaining online assessment platform for 100+ students.

Gooey.AI – *Software Engineer* — Jun. 2023 – Sep. 2024
- **Mentored**: team of 4 interns through merging 70 pull requests touching 1000s of daily active users.
- **Deployed**: ML solutions to 10M+ farmers across 5+ countries, demoed to 193 world leaders at the UN.
- **Python**: MLOps, Kubernetes, Docker, Google Cloud Platform, Django, Azure, OpenAI, Sentry, API design.

University of Washington ICTD Lab – *Undergraduate Researcher* — Sep. 2022 – May 2024
- **Shipped**: a USSD server and Android app via a digital intervention to connect 10K farmers in Tanzania.
- **Co-first authored eKichabi v2 paper**: on scaling technological interventions in Sub-Saharan Africa – accepted to ACM SIGCHI. Presented a 50 minute talk to 40 researchers at the CHANGE Seminar.
- **Python/Java**: Jupyter, Django, MySQL, Redis, HTTP, REST, USSD/Telecom APIs and Android Studio.

Akvelon – *Software Engineering Intern* — Jun. 2023 – Aug. 2023
- **Led**: team of 4 to make 200K open-source contributions to 7 Microsoft repos across 27 pull requests.
- **TypeScript/C++**: Power BI Custom Visuals, Automated Testing, Embedded Systems, and Azure IOT Hub.

European Environment Agency – *Data Science Intern* — Apr. 2020 – May. 2022
- **Authored**: 3 technical reports and 5 data analysis scripts used internally and by scientists in 40 countries.
- **Python**: Pandas, PySpark, Azure ML Studio, Azure Databricks, and Excel.

EDUCATION

University of Washington – *3.87 GPA, 3.96 in CS* — Sep. 2022 – Jun. 2026

BS+MS in Computer Science, BS in Mathematics, UWSO First Violin Section, Accelerated Honors Math

Bothell High School – *Valedictorian (4.0 GPA), Varsity Science Olympian* — Aug. 2018 – Jun. 2022

PROJECTS

PAGE – *Graph Embedding Research* — Sep. 2024 – Present

Invented and implemented a novel algorithm in C with visualization and verification in Python that outperforms all existing algorithms for calculating the genus of arbitrary cage graphs. Paper in review.

WiFi RSSI – *Windows App* — Jan. 2022 – Feb 2022

8000+ downloads, 4.4/5 rating. GUI to calculate the RSS in dBm of available networks by analyzing WiFi packets and BSSIDs. Made for WA Science Olympiad to standardize evaluation of antennas made for new WiFi Lab event.

PROGRAMMING SKILLS

Languages: JavaScript, TypeScript, Python, Java, C, C++, C#, SQL — 6+ years
Tech: Cloud (GCP, Azure, AWS), REST, PyTorch, Auto Testing, React, Docker, Unix, Git — 3+ years