GALEN POGONCHEFF

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Boulder, Colorado

Inspired machine learning scientist dedicated to research, innovation, and scientific advancement. Over 2 years of industry experience leading the development of novel, AI-based algorithms and growing a thriving, international startup.

Education

2022-2026 **PhD Computer Science (AI/ML)**
2020 **M.S. Computer Science - University of Colorado, Boulder** Specialization in Data Science and Engineering
2019 **B.S. Computer Science - University of Colorado, Boulder**

Experience

Jan. 2020 – Current | **Machine Learning Lead, Earable AI**
- Developing state-of-the-art machine learning algorithms for the inference of real-time neural data
- Leading Earable's Machine Learning team to implement and deliver algorithms exceeding clinical accuracy in accordance with company and investor deadlines
- Formulating research studies for data collection, algorithm development, evaluation, and scientific advancement of Earable systems
- Managing the integration and deployment of intelligent algorithms on the cloud, mobile devices, and Earable hardware

Python | C++ | TensorFlow | AWS | Google Cloud Platform | Weights & Biases

Aug. 2018 – May 2018 | **Software Development Intern, ANSYS Inc.**
- Implemented back-end APIs in and internal tools to aid the software development infrastructure
- Extended unit testing and regression testing platforms by writing more comprehensive test cases and adding support for scheduled testing

C# | Python | SQL

Aug. 2017 – May 2017 | **Data Science Intern, Power Factors**
- Implemented and evaluated regression models to forecast the performance of solar energy systems
- Automated the pre-processing and transformation of time series data from solar system IoT devices
- Implemented SQL database procedures to retrieve data for client reports and ad-hoc analyses

Python | scikit-learn | SQL

Publications

2022 **A Large-Scale Study of a Sleep Tracking and Improving Device with Closed-loop and Personalized Real-time Acoustic Stimulation** An everyday, wearable device capable of performing clinical-grade sleep analysis and innovative sleep enhancement through the inference of real-time brain, eye, and muscle signals with AI systems. Lead machine learning developer, data analyst, and co-author. Under review at Science Translational Medicine.

2022 **A Pilot Study Using the Earable Device to Assess Muscular Dystrophy** Co-first author, data analyst, and machine learning developer in a clinical study aimed at classifying facial gestures using electromyography signals acquired from a non-invasive, wearable headband for the treatment and evaluation of muscular dystrophy. Co-first author. Under review at PLOS.

Patents

Detection and Differentiation of Activity Using Behind-the-Ear Sensing : A novel hardware system and set of algorithms for the every-day diagnosis, treatment, and evaluation of cognitive and neurodegenerative conditions.

Primary Competencies

Programming	Python, C, C++
ML Frameworks	TensorFlow, PyTorch, scikit-learn
Cloud Computing	AWS, Google Cloud Platform
Development Tools/Services	Docker, Kubernetes, git
Visualization/Communication	Weights & Biases, Matplotlib, LaTeX