Olivia Buzek

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MACHINE LEARNING ENGINEERING LEADER

Experienced leader of machine learning and responsible AI teams, with an extensive background in collaborative development practices. Highlights include bringing inner source to an enterprise organization, launching reusable libraries around NLP and trustworthy AI, and implementing guardrails for LLMs. Seeking a Director or VP of Engineering role leading an organization with similar goals in the machine learning space. Committed to fostering collaboration and ethical practices to drive impact for clients and positive societal outcomes.

KEY COMPETENCIES

MLOps and LLMOps	Natural language processing	ML Strategy
Trustworthy and responsible AI	Inner source transformation	Python / TensorFlow / PyTorch

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PROFESSIONAL EXPERIENCE

IBM Research   **Nov 2021 - Present**
Program Director / Senior Technical Staff Member – watsonx.ai Platform Trustworthy AI

Accomplishments:
- Led productionization of IBM's state-of-the-art Trustworthy / Responsible AI research into LLMOps and MLOps systems.
- Awarded rank of STSM (requiring 15 executive-level internal and external references and review by committee of technical leaders) to expand these practices as core leader of the watsonx.ai Platform and to lead its ethical and responsible AI strategy.
- Won an Outstanding Technical Achievement Award and an IBM Corporate Award for inner sourcing IBM's first reusable Python / Java NLP stack, Watson NLP, using TensorFlow and PyTorch. Watson NLP is now the de facto standard for NLP at IBM.
- Founded Inner Source Program Office at IBM in 2021, now a core component of IBM's technical strategy, and included in the CEO's strategic outlook for 2022. Thought leader for Inner Source at IBM.
- Developed Watson Trust, a production-ready Python-based and sklearn-compatible library, expanding on the open-source AI360 libraries to create a consistent user experience for Trustworthy AI across all receiving products.
- Co-launched internal startup for low-code machine learning orchestration called Conveyor.ai, aiming to democratize access to developing end-to-end machine learning applications.

Senior Engineering Manager   **Jul 2019 - Nov 2021**

Accomplishments:
- Managed a team of 10 machine learning engineers, overseeing the day-to-day activities of two six-person cross-functional cloud and machine learning squads.
- Oversaw merger of two major NLP SaaS products. Grew organization, onboarding new remote teams into an integrated matrix management structure, and onboarding new engineers within a week.
- Guided the team towards an architecture that could decrease time-to-value on new machine learning features from 9 months to 3 months, including necessary experimentation.
- Improved internal developer experience NPS score by 20 points over one quarter by addressing handling of technical debt and service stability.

Engineering Manager   **May 2018 - Jun 2019**

Accomplishments:
- Managed a team of 6 machine learning engineers.
- Adapted IBM's leveling guidance into more specific and clear guidance for bringing junior engineers to senior level work, leading several team members to significantly increase their technical leadership abilities and align to company goals.
- Stabilized a high attrition and low morale product team, bringing attrition to effectively zero over one year.
- Created an Algorithms Guild to address the team's skills development in machine learning, and to facilitate discussion around different possible approaches to solve machine learning problems.
- Developed an Innovation Time framework where engineers can submit proposals to spend one week tackling an idea they have to improve the product, leading to beta features for explainability.

Machine Learning Engineer   **Nov 2015 – Apr 2018**

Accomplishments:
- Led the language expansion effort for the product's machine learning features in coordination with another machine learning team, bringing the time to a new language for all features down by 75%. Bringing a new language to market now takes 3 months. This work won an ISSIP – Excellence in Service Innovation Award.
- Gave an internal talk on "Linguistics for NLP System Builders" to help systems and cloud engineers understand basic linguistic concepts that significantly inform the architecture of an NLP-based product.

Palantir   **Nov 2012 - Jul 2015**
Forward Deployed Engineer

Accomplishments:
- Solely responsible for the primary technical outcomes for two large government clients, maintaining a complex user-facing data analysis stack and building front-end data analytics solutions with a variety of services built on Java, Oracle and several other open source technologies.
- Improved multiple inherited Java-based data integrations, reworked some to use more modern (internal) libraries and improved error handling, logging and stability of data flow for users.
- Modified Java-based front-end plugins to improve usability for clients and meet user needs, substantially decreasing the analysis time for daily user tasks by implementing hooks that allowed users to skip the step of hand-checking data in outside databases.

THOUGHT LEADERSHIP AND AWARDS
- "The Lifecycle View of Trustworthy AI." Medium. October 2021.
- "Birth of InnerSource at IBM." InnerSource Summit. November 2021.
- IBM Corporate Award, 2022
- IBM Outstanding Technical Achievement Award, 2021
- ISSIP – Excellence in Service Innovation Award, 2017

EDUCATION

Johns Hopkins University, Baltimore, MD
Graduate coursework and research – Machine Learning and Natural Language Processing

University of Maryland, College Park, MD
B.S. Computer Science
College Park Scholars Program