Miami University – Maxbyte Research Collaboration Workshop

Date: August 8, 2025

Time: 10:00 AM – 12:00 PM

Workshop Location: Engineering Technology Laboratory, Phelps 102, Miami University – Hamilton Campus.

Team H: Maxbyte Team, Cincinnati Radiator (Chuck Baker Sr.), Dr. Reza, Dr. Ibrahim, Micheal Wise, and Mohammad Mayyas
Team O: Fadel, Jay, Arthur
Other attendee: Mo Farrag, Meetkie Team (Optional).

Zoom Link for out of state attendees:

https://miamioh.zoom.us/j/87814020624?pwd=LzlasS6ACSxM62h5lIicDbOuXiS5jE.1

Workshop Agenda

10:00 AM – 10:10 AM – Welcome & Introductions
Introduction of participants from Miami University (Hamilton & Oxford), Maxbyte, and industry partners. Objectives of the workshop and outcomes aligned with strategic research and safety innovation goals. On-site development planning. *Facilitator: Dr. Mohammad Mayyas*

10:10 AM – 10:25 AM –Live Demo: Machine Operation and Safety Review
On-site demonstration: Manual Lathe, TL-1 CNC, and Universal Robot. Highlight safety-critical zones, potential hazards, and initial AR-IoT integration points. *Facilitator: Michael Weise.*

10:25 AM – 10:35 AM Industry Perspective: Training & Safety Standards
Safety culture, workforce onboarding, and incident prevention strategies in industrial environments. *Guest Speaker: Safety Manager, Cincinnati Radiator*

10:35 AM – 10:50 AM – Maxbyte Technology Briefing
Overview of AR/IoT platforms, use cases in manufacturing safety and performance analytics. Areas of technical alignment with Miami's equipment and research goals. Equipment procurement plan, *Presenter: Maxbyte Team*

10:50 AM – 11:05 AM – Research Plan Overview and brainstorming: Phases 1–6 and Implementation Strategy

Review of research objectives including AR-based 3D model recognition, IoT interfacing, risk scoring, and closed-loop machine feedback. Updates on CAD-free modeling and segmentation (Phase 1) and risk scoring logic (Phase 1B, 5). *Faciliatory: Mohammad Mayyas, Ibrahim & Dr. Reza Abrisham Baf*

11:10 AM – 11:25 AM – Oxford AI/ML Team Discussion

Integration of Oxford-led efforts into implementation plan. Topics: image segmentation, multimodal data pipelines, risk prediction models, and LLM-based chatbot development. Synchronization between AR frontend and backend model inference. Presenters: Fadel, Jay, and Arthur. *Discussion Facilitator: Fadel/Author/Jay*

11:25 AM – 11:50 AM – Collaborative Planning Session: Sync Gantt Charts and Next Steps

Coordinated discussion on implementation timeline and roles. Data standardization, instrumentation protocols, and technical handoffs. Establishing first project milestone dates and action assignments. *Discussion All*

11:50 AM – 12:00 PM – Wrap-Up & Follow-Up Planning

Recap of key decisions, deliverables, and assigned leads. Confirm schedule for regular team meetings and data sharing platforms. *Final Q&A*

12:00 PM – 1:00 PM – Lunch (Pizza)