

## What Can Artificial Intelligence Do for Manufacturing: Bridging Innovation in the STANLEY+Techstars Accelerator

By Alex Angilella

The manufacturing industry is looking towards artificial intelligence (AI) for the next disruption in the marketplace. Manufacturing is an industry that is based on speed, heavily dependent on volume, and always monitoring safety. Where does MITRE fit in all of this?

MITRE fits in among all this as an impartial actor connecting the best and brightest in our nation's startup ecosystem with government sponsors to leverage the innovation of startups to solve our nation's toughest problems. Through the Bridging Innovation effort, MITRE has been participating as a mentor in the Stanley Black & Decker Techstars Accelerator since 2018. The coronavirus pandemic delayed the 2020 accelerator, but MITRE was able to continue mentoring activities when the accelerator restarted in January of 2021 and ran until demo day in April.



The virtual accelerator provided new challenges and opportunities. Like many work experiences, in-person meetings and demo days were replaced with virtual congregations and streaming presentations. MITRE's Bridging team was still able to meet with the ten founders to discuss emerging technologies. The founders in this year's accelerator sought to leverage AI to improve various aspects of manufacturing. Companies attacked branches of manufacturing and production networks from inventory management to additive integration to safety improvements. Even next generation physical tags (to replace barcodes) were of interest. MITRE's Bridging Innovation team for STANLEY+Techstars included Paul Silvey, Francisco Ramos, Dr. Jacob Bryan, and Dr. Alex Angilella as the engagement lead.

MITRE mentored Slytrackr, a company that focused on retrofitting legacy machine tools with modern digital monitoring tools to better interface with CAD/CAM and predict tool wear. MITRE connected Slytrackr with sensor subject matter expert Justin Tufariello to discuss options for future sensors that AI algorithms could use to boost health usage and monitoring capabilities. MITRE also mentored Malamute, a company that focuses on using AI-enabled noise cancellation in networked audio devices to provide all users with the information they need. Pivoting from the technical mentoring, MITRE connected Malamute with Dr. Christopher Benson for a valuable overview of the SBIR/STTR process to help guide them to future opportunities to demonstrate their capabilities. MITRE provided technical insight and feedback when mentoring EMS Forest, a company that focused on coding expert intelligence to predict failure in printed circuit boards.

MITRE pursued mentoring by facilitating communication with subject matter experts and acquainting founders with the SBIR/STTR process to ease the transition for founders seeking government investment. In a unique year, MITRE adapted to fully online environment to continue bridging engagements. Many promises have been made on the potential of artificial intelligence. Exactly where this will lead the manufacturing industry is unknown, but MITRE will continue to bring subject matter expertise to emerging fields and connect emerging fields to our nation's pressing problems.

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