

<h1>Hala Mostafa</h1> <h2>Data Science Manager</h2> <p> <a href="http://www.hmostafa.com">http://www.hmostafa.com</a>  <a href="mailto:hala.mostafa@gmail.com">hala.mostafa@gmail.com</a>  413.658.8777 </p>	<h2>Work Experience</h2> <p> <i>RTRC: Raytheon Technologies Research Center</i>  <i>DSMI: Decision Support and Machine Intelligence Group</i> </p>
<p> <b>Ph.D. in Computer Science</b>, 2011  University of Massachusetts, Amherst.  <i>“Exploiting Structure In Coordinating Multiple Decision Makers”</i> </p>	<p> <b>Team Lead, RTRC</b> <span style="float: right;"><b>Jan 2021 - Present</b></span> </p> <p> Lead of the <i>Advanced Learning and Analytics</i> team (and Project Manager on multiple projects). <b>Responsible for</b> working with: </p> <ol style="list-style-type: none"> <li>1. My team: Career development guidance. Recruiting.</li> <li>2. Broader organization: Work with management and other teams to develop AI/ML business strategies and roadmaps.</li> <li>3. Customers: Help prioritize IRAD investments in various AI/ML technologies based on relevance to products and operations.</li> </ol>
<h2>Recognition</h2> <ul style="list-style-type: none"> <li>○ Among ~100 engineers nationwide selected by the National Academy of Engineering for the Frontiers of Engineering Symposium.</li> <li>○ Designated “high potential” based on “ability, drive and demonstration of leadership behaviors”.</li> <li>○ Twice part of the winning team of “Impact and Delivery of Excellence Awards” at RTRC.</li> <li>○ 4 patents + 2 in progress.</li> <li>○ Multiple internal awards for technical execution and customer focus.</li> </ul>	<p> <b>Principal Scientist, DSMI, RTRC</b> <span style="float: right;"><b>2019 – 2020</b></span> </p> <p> <b>Responsibilities:</b> Technical leadership, mentoring, project management, VPs and upper management presentations, external relations, business development. <b>Notable projects:</b> </p> <ol style="list-style-type: none"> <li>1. Extract degradation indicators from high-dimensional high-rate data. Predictive and anomaly detection models. Model included in a dashboard used to avoid costly system grounding.</li> <li>2. Predict remaining useful life from performance metrics of a system to inform condition-based maintenance. Model adopted.</li> <li>3. Fault detection and classification from processed sensor data where training and test data come from different environments. Published a novel Transfer Learning approach.</li> </ol>
<h2>Skills</h2> <ul style="list-style-type: none"> <li>○ Excellent communication, project management and interpersonal skills.</li> <li>○ Experience with ML/RL packages</li> <li>○ Familiarity with the latest MLOps trends, tools and pipelines.</li> <li>○ Python: 7 years. Java, Matlab, SQL: 15 years.</li> </ul>	<p> <b>Staff Scientist, DSMI, RTRC</b> <span style="float: right;"><b>2015 – 2019</b></span> </p> <p> <b>Responsibilities:</b> Worked with domain experts to identify the ML problem. Implemented models. Created excellent customer relations resulting in funding and testimonials. <b>Notable projects:</b> </p> <ol style="list-style-type: none"> <li>1. Predict a system’s repair cost from component damage levels. Assess work scope creep. Model enabled accurate contract pricing and understanding variance across repair shops. Winner of highest RTRC award.</li> <li>2. Identify factors affecting manufacturing process yield and understand process parameters variance. Findings identified furnace problems and inconsistencies in manufacturing process.</li> <li>3. Identify factors affecting rate of component wear. Engineer historical summary features. Predict wear given these features. Post-hoc model and error analysis to improve interpretability.</li> </ol>
<h2>Earlier Work Experience</h2> <p> <b>Singapore Management University</b>  <b>2014 – 2015</b>  Visiting Research Scientist  Living Analytics Research Center </p> <p> <b>BBN Technologies</b> <span style="float: right;"><b>2011 – 2014</b></span>  Research Scientist  Distributed Systems Group </p>	