

# Semaa Amin

[Portfolio](#) • (206) 992 5993 • [sema.amin9@gmail.com](mailto:sema.amin9@gmail.com) • San Jose, CA • [LinkedIn](#) • [GitHub](#)

## CORE COMPETENCIES

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- **Agile Methodologies** – effectively drive ongoing enhancements and iterative advancements of the product, ensuring a streamlined and adaptive approach to product development using tools like Notion, Jira, Trello, Smartsheet
- **Engineering Critical Path** – develop validation plans that are integrated into program timelines with a clearly defined critical path. Ensure plan execution while actively de-risking the critical path.
- **Risk Management** – work with the teams across the business to identify program risks, develop mitigation plans, and escalate before risks are realized. Communicate with leadership and ensure alignment on the way forward.
- **Issue Management** – Provide a forum for engineers to identify design issues. Evaluate findings and assess their impact on validation plans. Help engineering teams track and resolve issues throughout the life of the program.
- **Scope Management** – understand program goals and content and decompose them into validation plans. Assess the impact of scope changes to the program and be the voice of validation activity to the business on the feasibility of changes.
- **Budget Management** – own the program test budget and collaborate with engineering functions to minimize cost. Develop long-term strategies to reduce expenditures and reliance on physical assets.
- **Technical Integration at all levels** – Bring teams together to facilitate cross-collaboration, negotiate trade-offs, and escalate issues to leadership.
- **Manufacturing Process Management** – introduced revolutionary new products into manufacturing. Led cross-functional teams of 30 engineers across design, engineering, data science, research, customer experience and product marketing to bring a lab-developed product into mass production at a local production facility
- **Data Visualization** – Architected a Tableau data visualization dashboard from scratch, for fast data ingests and analytical query processing on large or complex data sets. Facilitated data wrangling by connecting the Manufacturing Execution System (MES) API to Tableau. This decreased the engineering hours from 6 h/day to less than 1 h/day of yield and defect data analytics, allowing engineers to focus more on execution rather than data analytics
- **Material Planning** – coordination with Supply Chain to plan materials for a new product. Planning materials around Cycles of Learning (COL), early-stage production and process validation.

## TECHNICAL SKILLS

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**Languages, Libraries & Tools:** C, C++, C#, Java, Python, JavaScript, HTML, CSS, Kotlin, Keras, TensorFlow, Roboflow

**Mobile & Web Applications:** React.js., PHP, ES6, Node.js, Express.js, Bootstrap, JSON, JQuery, Kotlin, Android Studio, VS Code

**Databases:** MySQL, NoSQL, MongoDB, Redis, CouchDB, Lucidchart

**XR, AR, VR, MR development:** Unity, Unreal Engine, Blender

**Productivity:** Notion, Google Suite, MS Office, Jira, Smartsheets, MS Project, Confluence, Github, Arena

## EXPERIENCE

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GAF Energy, San Jose, California

July 2022 - present

*Technical Program Manager, Engineer II*

- **Hardware NPI Leadership** – Lead the hardware manufacturing of New Product Introduction (NPI) programs through the different phases of the engineering development lifecycle.
- **Quality Management in Hardware Programs** – Manage multiple hardware programs to ensure hardware is manufactured at the highest levels of Quality, Reliability, Safety, and alignment to schedule for delivery to partner factories.
- **Cross-Functional Team Leadership** – Lead a cross-functional team within the Manufacturing, NPI and R&D teams in a fast pace and complex environment to ensure partner site readiness, identify & manage build risks, drive for mitigations and lead manufacturing gate reviews.
- **Engineering Problem Solving in NPI** – Able to leverage experience & engineering skills to solve problems, fill gaps & achieve objectives through a cross-functional team.
- **External Partner Relationship Management** – Maintain NPI manufacturing relationship & operations with external partner towards a common goal.
- **Program Clarity and Efficiency** – See the bigger program picture to drive program clarity & efficiency, influence stakeholders & shift things to the left.
- **Supply Chain Definition and Management** – Define BOM for supply chain & drive team towards project schedules, from operational readiness to product quality delivery.
- **Innovation in NPI Processes** – Provide innovation & creativity in developing new tools & processes that scale our growth in deploying NPI hardware efficiently & predictably.
- **Stakeholder Communication** – Interact comfortably & efficiently with senior management & executive leadership team, highlighting risks & providing recommendations to support product-level decisions.
- **Program Status Communication** – Communicate program status to stakeholders in a clear and timely manner using written, verbal, & analytic formats.
- **Continuous Improvement Initiatives** – Work with cross-functional teams to develop and implement continuous improvement initiatives to increase efficiency & reduce costs.
- **Project and Program Management** – Utilize project, program and product management skills, including the ability to develop and maintain detailed project schedules, track progress, identify & mitigate risks, & drive decision-making to keep programs on track.
- **KPI Development and Implementation** – Work with cross-functional teams to develop and drive key performance indicators (KPIs) & metrics to measure project performance and identify areas for improvement.

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SAP, Remote, USA

August 2022 - March 2023

*Mixed Reality Developer*

- **3D Experiences Design & Builds** – in VR, AR, MR which integrate into SAP's Innovation & Pioneering team's emerging projects
- **Prototyping in XR** - from imagination to completion, new and practical use cases for emerging technology in business applications with an eye toward intuitive usability and feel
- **XR Digital Twin** - collaborated on a XR digital twin immersive and interactive product with teammates from across the globe
- **Architect efficient and reusable systems** – drives complex AR/VR applications
- **Lead design and implementation** – of playful and creative projects for Experiences in AR, VR and MR
- **Lead collaboration** – with multi-functional teams to achieve compelling experiences. Engage with Engineering, Research, Design, UX Research and Data Science teams to understand and apply findings from user studies, experiments/testing and production metrics

Northeastern University, San Jose, CA

January 2021 - May 2022

*Graduate Student Ambassador*

- **Event Planning** – improved Northeastern University student experience by planning 12 events in 12 months for the San Francisco and Silicon Valley campuses as part of a group of 4 high-calibre students
- **Content Creation** – Increased community engagement & delivered engaging content about events, productivity, computer science & other news
- **Peer Mentoring** - provided tips and advice for current and incoming students related to on-campus activities, extracurriculars and courses

ACDS, Alberta, Canada

March 2019 - April 2020

*Energy Efficiency Coordinator*

- **Energy Efficiency Portfolio Management** – of a non-profit umbrella organization that accredits 144 other nonprofits and small businesses in the disability sector
- **Energy Efficiency Education** – created an online course, website, workshops and a social media campaign
- **Front-End Web Development** – built an online energy savings tool that allows users to accurately calculate home and business energy savings by switching to more efficient appliances

## EDUCATION

Northeastern University, San Jose, CA

May 2022

Masters of Science in Computer Science

Related Coursework: Mixed Reality (XR, AR, VR, MR), Fundamentals of Software Engineering, Database Management Systems, Web Development, Data Structures & Algorithms, Mobile Application Development, Fundamentals of Computer Networking, Intensive Foundations of Computer Science, Discrete Structures Object Oriented Design, Computer Systems

University of Calgary, Alberta, Canada

June 2018

Bachelor of Science in Energy Science & Sustainability, Bachelor of Arts in French Language & Literature, Front-End Web Certificate

Related Coursework: Fuel Cells, Nuclear Energy, Solar Power, Geothermal Energy, Environment & Sustainability, French for Business Affairs, HTML & CSS, HTML5 and CSS3 with jQuery, Javascript and the DOM, Advanced Javascript

Quantic School of Business - Executive MBA

July 2023

Related Coursework: Markets & Economies, Data & Decisions, Accounting, Supply Chain & Operations, Strategy, Marketing & Pricing

Correlation One Data Science For All (DS4A) - Data Engineering Certificate

March 12<sup>th</sup> - July 16<sup>th</sup> 2022

Related Coursework: distributed computing, batch and streaming architecture, building data visualization applications.

## PROJECTS

### Adaptive Physical Rehabilitation in Extended Reality (XR)

Northeastern University, San Jose, CA

- Led the VR environment design team within an interdisciplinary team of 10 students to create a VR app that helps patients recover from total knee replacement surgery by doing recommended exercises in VR immersion
- Team won [Northeastern University's Rise Awards](#)
- Unity, C#, ArcGIS, Oculus, VR, Blender

### Improved Pharmacy Data Management System Web Application

Northeastern University, San Jose, CA

- Engineered an improved data management system web application that simplified daily pharmacy tasks and reduced errors
- Combined the inventory system and the pharmacy filling system into one application, increasing operational efficiency
- HTML, CSS, JS, React, Mongo.db, Node.js, SQL

### Search and Rescue (SAR) Simulation using Algorithms and Machine Learning

Northeastern University, San Jose, CA

- Built a remote mountain SAR animated simulation using Unity using different algorithms to find the fastest path to lost people
- Coupled the simulation with Machine Learning, whereby the model was trained to accurately detect images of people
- Unity, C#, algorithms, machine learning, Roboflow

### Food Delivery and Philanthropy Mobile App

Northeastern University, San Jose, CA

- Created app to facilitate philanthropy through food; part of an interdisciplinary team to solve a Google Dev Club Challenge
- App allows users to donate money when ordering food to go towards a meal for a person in need
- Kotlin, Android Studio, Firebase, Figma, Lucidchart

## LANGUAGES

French (professional working fluency), Malaysian (professional working fluency), Spanish, German, Italian, Turkish & Arabic (All basic fluency)