

## Igor Pedan

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### Summary

- An experienced leader laser-focused on results, teamwork, and quality.
  - Superior project management expertise in fast-paced, dynamic environments -- quickly and efficiently resolving conflicts with limited available information.
  - Extensive background in building both disconnected and cloud-based, scalable and secure systems with cutting edge tools and technology.
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### Experience

#### Head of Robotic Induction

September 2021 - Present

Amazon Robotics

- General Manager of Amazon Robotics' \$250 million Robotic Induction program responsible for all aspects including developing long-term strategy, business development, and program execution.
- Pivoted strategic product roadmap anticipating shifting business need doubling the program's production footprint in 2022 while decreasing cost by 50%.

#### Senior Technical Program Manager

July 2020 – August 2021

Amazon Robotics

- Cross-functional TPM of AR's largest Robotic Induction program with over two dozen teams and more than 100 heads.
- Scaled product from 18 prototype units to handling 30% of Amazon's sortation volume (50 million packages in December).
- Developed relevant KPIs and dashboards building a culture of data-driven decision making enabling 40% increase in hourly throughput while reducing fault rate by 70%.
- Identified over \$20 million in cost reductions for 2021.
- Introduced Agile principles to team and transformed team from one release a year to monthly SW releases.
- Instituted tiered support model to reduce engineer support burden by 80%

#### Director of Software Engineering

August 2018 — July 2020

AiRXOS, Inc/GE Aviation

- **Executed world's first kidney transplant delivered by a drone. Met extremely tight deadlines with limited resources while not sacrificing safety**
- Scaled engineering team from 4 developers to over 25 on-shore developer and 20 off-shore developers.
- Lead a growing and diverse Agile team of managers, software developers, QA, and systems engineers fostering cross functional collaboration and a culture of teamwork, empathy, and accountability to attract and retain world-class talent.
- Enabled rapid innovation and significantly decreased time-to-market by creating AiRXOS's rapid prototyping team responsible for identifying technological gaps in AiRXOS products and rapidly developing and integrating solutions for these gaps.
- Worked with product management to build long term strategic vision while also tactically executing to build MVP products and generate 100% AiRXOS 2018-2020 revenue by building and supporting several distinct product lines and R&D efforts.
- Built AiRXOS's reputation as the go-to industry partner with FAA, NASA, MIT, John's Hopkins through exemplary boots-on-the-ground execution of major software and flight integration exercises coordinating with dozens of partners and integrating dozens of systems.
- Actively participate in the ASTM UAS F38 USS to USS standards body.

**Lead Software Engineer / Development Manager**  
AiRXOS, Inc/GE Aviation

July 2017 – August 2018

- Lead developer on both the frontend (JavaScript) and the backend (Java) of AiRXOS's Unmanned Aircraft System Traffic Management System (UTM).
- Single-handedly built AiRXOS's real time situational awareness display used within the UTM to visualize flight locations, airspace volumes, airspace restrictions, terrain, alerts, and system status (jQuery, SemanticUi, CesiumJs).

**Awards**

- **2020:** *Impact* award for successfully leading multiple teams in six concurrent, large-scale flight test exercises.
- **2019:** *Standing Ovation* award -- AiRXOS's highest honor -- for enabling the safe delivery of world's first kidney transplant delivered by a drone.
- **2018:** Both the *Impact* and *Bravo* awards for helping AiRXOS stand out among all participants in numerous UAS industry-wide software integration trials.

**Associate Staff (Software Developer), Team Lead – Airborne Networks**  
MIT Lincoln Laboratory, Lexington, MA

March 2006 – July 2017

- Oversaw teams of software developers and hardware engineers, in charge of all aspects of executing many dozens of flight missions of Lincoln Laboratory's 707 airborne signals testbed. Managed numerous multi-million dollar flight-test exercises proving out technologies that as a result were adopted by various DoD entities.
  - Reduced flight mission resource requirements by 75 percent by streamlining processes and building a real-time situational awareness system to help coordinate flight testing. The tool has been used in hundreds of field and flight tests and continues to be used to this day. It includes status of various onboard sensors, a chat client, an interactive live map, and current and historic network.
  - Drastically reduced cost of 707 flight missions by virtualizing dozens of the mission critical systems reducing Size/Weight/Power (SWAP) of onboard equipment from over a dozen fully loaded racks of servers to one. Streamlined testing infrastructure to support many more simultaneous tests
  - Built a complex, scalable real-time application to visualize power flow and relay status of multiple Power Systems microgrids. Development included scoping, collecting the data, storing the data, and building a front end to efficiently and smoothly display the data in real-time.
- Other significant accomplishments:**
- Enabled an enhanced security posture by building a cyber event tracker used at PACOM, SOUTHCOM, and CENTCOM.
  - Developed the Open Shortest Path First (OSPF) formula still used in Navy Research Lab's NRL's Quagga Router MANET extension.

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**Education**

**Master of Computer Science**

Brandeis University, Waltham, MA

January 2006

**Bachelor of Science Computer Science and Philosophy**

Brandeis University, Waltham, MA

January 2005

**Other Experience**

Founder of a weekly twenty-page student newspaper -- The Brandeis Hoot. As its inaugural editor-in-chief, I secured funding, recruited staff, organized editors, developed a style guide, and oversaw daily operations. Paper still in-print today.

**Skills  
Technologies**

Python, Java, JavaScript, MySQL, Postgres, InfluxDB, Hazelcast, Elastic Search, Redis, PHP/HTML/CSS, Linux (Ubuntu, RedHat/CentOS), GIT, Perl, some C++, UTM, UAM, Remote ID, UAV Detect and Avoid, Asterix, Network stack, UDP/TCP, MANET, Multicast, Agile, Scrum, AWS, Jenkins, JIRA, Aha, Confluence.

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**Publications**

S. Arbiv, R. Amin, T Goff, D Street, **I Pedan**, L Bressler, T Gibbons B.N. Cheng and C. Timmerman, "Data Collection and Analysis Framework for Mobile Ad Hoc Network Research", IEEE Military Communications Conference MILCOM 2019, November 2019.

L. Ren, R. Fisher, J. Lopez, J. Markham, M. Figard, R. Evans, R. Spoelhof, **I. Pedan**, M. Rubenstahl, S. Edwards, B. Meng, C. Barrett, "Integration and Flight Test of Small UAS Detect and Avoid on A Miniaturized Avionics Platform" The 38th AIAA/IEEE Digital Avionics Systems Conference. September 2019

**Best Paper Award:** T. Gibbons, R. Amin, J. Wang, **I. Pedan**, T. Goff., et al., " Performance Evaluation of Air-to-Air BE-CDL", IEEE Military Communications Conference MILCOM 2017, 2017.

B. N. Cheng, A. Coyle, S. McGarry, **I. Pedan**, L. Veytser and J. Wheeler, "Characterizing Routing with Radio-to-Router Information in a Heterogeneous Airborne Network," in IEEE Transactions on Wireless Communications, vol. 12, no. 8, pp. 4183-4195, August 2013.

**I. Pedan** and B. N. Cheng, "An open source situational awareness display for administering heterogeneous networks on the tactical edge," MILCOM 2012 - 2012 IEEE Military Communications Conference, Orlando, FL, 2012, pp. 1-6.

B.N. Cheng, R. Charland, P. Christensen, A. Coyle, **I. Pedan**, L. Veytser, et al., "Comparing radio-to-router interface implementations on experimental CoTs and open source routers", IEEE Military Communications Conference MILCOM 2012, 2012.

B.N. Cheng, A. Coyle, S. McGarry, **I. Pedan**, L. Veytser and J. Wheeler, et al., "Characterizing routing with radio-to-router information in an airborne network," 2011 - MILCOM 2011 Military Communications Conference, Baltimore, MD, 2011, pp. 1985-1990.

B. Ganguly, S. Finn, J. McLamb, W. Bynoe, L. Veytser, **I. Pedan**, J. Mineweaser, S. Davidson, "The airborne network definition project: a network architecture effort for future battlefield networks that enable network-centric warfare", Proceedings of SPIE; Nov2007 Part 2, Issue 1, p65780P-65780P-12, 12p

## Kyle Wiley

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**From:** Igor Pedan <ipedan@hotmail.com>  
**Sent:** Thursday, September 1, 2022 9:57 PM  
**To:** Kyle Wiley; mhull@mhdld.com  
**Subject:** Light Commission Vacancy  
**Attachments:** Resume-Igor-Pedan-2022.pdf

Dear Selectboard and Light Commission,

I'm Igor Pedan of 33 Auburndale Rd. Please use this email as my letter of interest in the light commission board vacancy.

Growing up next door in Swampscott, civic engagement has always been in my blood. As high school student I was a town meeting checker, student rep to the school committee, and help with many local campaigns. In college I was the founder of a student weekly newspaper that's in print to this day 18 years later.

Since my family moved back to the area several years ago, I've been looking for ways to get more engaged in the town. This vacancy seems like the perfect opportunity. I'm passionate about sustainability and making sure we make prudent choices so that my kids still have a habitable planet. In my current role at Amazon Robotics, I guide my teams to be better in every way for our planet and communities.

In Marblehead, we are lucky to control our own energy destiny and to be leader for communities across the Commonwealth. We need people at the helm of our public boards and commissions who make informed decisions and can properly weigh the scientific evidence to help reverse the extreme weather trends we are seeing globally. Hopefully my background and professional experience show that I'm one of these people who can help us chart this course.

Thank you,

Igor Pedan  
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