Maria Patterson

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OPEN INNOVATION ■ TECH TRANSFORMATION ■ STARTUPS

EXPERIENCE

LG NOVA, LG ELECTRONICS NORTH AMERICAN INNOVATION CENTER
DIRECTOR OF NEW VENTURES, ENTREPRENEUR-IN-RESIDENCE, INCUBATION TEAM
May 2022 – present | ⚲ Santa Clara, CA office (remote)

- Partnering with tech startups for outside-in innovation to develop and validate joint business concepts with LG Electronics through a Grand Challenge phased competition framework in the Office of the Chief Strategy Officer.
- Leading business plan development and investment pitches to LGE leadership for new mini business units in the renewable energy, electric mobility, connected health, and smart lifestyles sectors via lean innovation processes.

WHITE HOUSE PRESIDENTIAL INNOVATION FELLOWS PROGRAM
PRESIDENTIAL INNOVATION FELLOW, TECHNOLOGY TRANSFORMATION SERVICES
ENTREPRENEUR-IN-RESIDENCE, DETAILED TO U.S. DEPARTMENT OF LABOR
Oct 2020 – May 2022 | ⚲ Washington, DC (remote)

- Senior Advisor to the Office of the Chief Information Officer - Partnered with the DOL's Chief of Emerging Tech, Chief Technology Officer, and Chief Innovation Officer to lead development of a responsible AI framework for advancing and de-risking modern tech adoption via a pilot project for helping veterans transition to civilian employment equitably.
- Senior Advisor to the Office of Disability Employment Policy - Led development of equitable AI guidance, resources, and tools for employers, including the "Combating Bias in AI Toolkit" and the Partnership on Employment and Accessible Technology's "AI and Disability Inclusion Toolkit: Implementing Equitable AI in the Workplace".
- Co-lead for the AI Community of Practice - Launched the working group on Responsible AI and drove a cross-agency sprint to create AI transparency resources for the Federal government now introduced in four other countries.
- Co-wrote strategic direction proposal for artificial intelligence projects in response to White House executive order.

HIGH ALPHA INNOVATION
SENIOR DATA SCIENTIST
Jul 2020 – Oct 2020 | ⚲ Indianapolis, IN

- Led AI/ML business ideation in partnership with large organizations to innovate through startup and venture studio launch.
- Designed data product roadmaps and machine learning pipelines for software startups ranging from pre-launch to Series B.

HIGH ALPHA STUDIO
DATA SCIENTIST / MACHINE LEARNING ENGINEER
Oct 2018 – Jun 2020 | ⚲ Indianapolis, IN

- Designed and validated B2B SaaS concepts in a venture studio environment, prototyped technology, and developed business plans to pitch to investors through a rapid "sprint week" process, resulting in five launched and funded startups.
- Led the technical design of architecture for cloud-based (GCP and AWS) data analysis pipelines and developed machine learning models for early-stage B2B SaaS companies in the High Alpha venture studio portfolio.

DATA INTENSIVE RESEARCH IN ASTROPHYSICS AND COSMOLOGY (DIRAC) INSTITUTE, UNIVERSITY OF WASHINGTON
RESEARCH SCIENTIST III, DATA MANAGEMENT, LEGACY SURVEY OF SPACE AND TIME, VERA RUBIN OBSERVATORY
Aug 2016 – Oct 2018 | ⚲ Seattle, WA

- Designed a real-time data processing and analysis framework for terabytes of streaming astronomical data using Python, Kafka, Avro, and Docker and collaborated on system requirements across five institutions in an Agile environment.
- Led the production deployment of real-time data streaming technology for an international telescope collaboration project, which processes data from one million astronomical objects in the sky each night and is hardened at 10x scale.

CENTER FOR DATA INTENSIVE SCIENCE, UNIVERSITY OF CHICAGO
DIRECTOR OF THE OPEN SCIENCE DATA CLOUD
Sep 2013 – Jul 2016 | ⚲ Chicago, IL

- Directed operations of a petabyte scale "data commons", managing an on-prem cloud and data science services for thousands of researchers across the globe and coordinating with systems and software engineers in a matrix organization.
- Directed an international data science and cloud computing summer fellowship program and supervised student projects.
- Led the design and launch of a 300 TB open data hub with the Open Commons Consortium for NOAA's Big Data Project.

EDUCATION

NEW MEXICO STATE UNIVERSITY | PhD, Astronomy
May 2013 | ⚲ Las Cruces, NM

UNIVERSITY OF CHICAGO | BA, with Honors, Physics with a specialization in Astrophysics
May 2007 | ⚲ Chicago, IL

SKILLS

Industry Specific Expertise	Interpersonal	Technologies
Lean startup ▪ Business development	Cross-matrix organizations	AI/ML languages: Python, R, SQL
Corporate innovation ▪ Startups	Agile development ▪ Mentoring	Data management: Docker, Kafka
Product management ▪ AI/ML	Public outreach ▪ Scientific writing	Clouds: AWS, Google Cloud Platform

PROFESSIONAL ENGAGEMENT

Keynote, "Incentivising Good Behaviour" — FWD50 2022	Ottawa, Ontario, Canada | Nov 2022
Panelist, "Using Your Tech Skills In Public Service" — Tapia Celebration of Diversity in Computing	Virtual | Sep 2021
Speaker, "Cloud architecture for the data scientist" — Indy Cloud Conf 2020	Indianapolis, IN | Jun 2020
Speaker, "Building a newsfeed from the Universe" — Kafka Summit 2019	San Francisco, CA | Oct 2019
Panelist, Careers in Science — Field Museum's 5th Annual Chicagoland Women in Science Mixer	Chicago, IL | Oct 2019
Panelist, "Befriending failure" — Tapia Celebration of Diversity in Computing	Atlanta, GA | Sep 2017
Speaker, "Building a community fountain around your data stream" — PyData 2017	Seattle, WA | Jul 2017
Panelist, "Turning Big Data into Big Opportunities" — Tapia Celebration of Diversity in Computing	Austin, TX | Sep 2016

ADVISORY AND COMMITTEE SERVICE

Committee Member — AAS's Committee on the Status of Women in Astronomy (CSWA)   Jun 2017 - Nov 2021
- Charged with providing recommendations to the American Astronomical Society (AAS) Board of Trustees for practical measures that can be taken to improve the status of women in astronomy and encourage entry into the field.

Sub-group committee member — CSWA Strategic Plan   Oct 2019 - Nov 2021
- Charged with writing a cascade model strategic plan, providing direction for the next 10 years of focus areas important to women in the astronomical community.

Sub-group committee member — CSWA Astro2020 Decadal Survey White Papers   Jun 2019 - Dec 2019
- Co-authored two science white papers on state of the profession to the Astro2020 Decadal Survey on Astronomy and Astrophysics organized by the National Academy of Sciences.

Planning Committee — PyData Seattle Conference   Jun - Jul 2017
- Scientific organizer and reviewer for conference speaker proposals.

Diversity Committee — PyData Seattle Conference   Jul 2017
- Responsible for sponsorships and scholarships for underrepresented attendees.

VOLUNTEER EXPERIENCE AND EXTRACURRICULARS

Advisor — #BuiltByGirls WAVE Mentoring Program	Jun 2019 - present
Member — American Astronomical Society's Committee on the Status of Women in Astronomy	Jun 2017 - Nov 2021
Editor — AASWomen's Women in Astronomy Newsletter	Aug 2016 - Nov 2021
Mentor — Tanzanian Data Lab + Grindstone Accelerator entrepreneur program	Mar 2021
Mentor — Harvard Computer Society Tech for Social Good Entrepreneurship Wintersession	Jan 2021
STEM gallery volunteer — The Children's Museum of Indianapolis, Beyond Spaceship Earth exhibit	Aug 2019 - Mar 2020
Co-Organizer — PyLadies Seattle and PyData Seattle Meetup Groups	Jan 2017 - Oct 2018
Mentor — New York Academy of Sciences NEXT Scholar Program	Mar 2017 - Aug 2017
Distance Runner — 22 races including 1 marathon and 7 half marathons	