

MS Career Opportunities and Job Search

Jaime H. Moreno, IBM Research
Ayanna Howard, Ohio State (Substituting for
Nancy Amato, UIUC)



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Jaime H Moreno – jhmoreno@us.ibm.com

- **Originally from Chile**
- **Current role**
 - Distinguished Researcher, IBM TJ Watson Research Center, NY
 - Area of expertise: Computer/Processor Architecture
 - Recent big project: IBM Summit and Sierra supercomputers (#1/#2 Top500 in 2018-2019, #2/#3 today)
 - Current focus: Cloud Infrastructure
- **Previously (although long ago ..)**
 - Faculty Member, University of Concepcion, Chile
 - Computer Science MS, PhD - UCLA
 - Electrical Engineer - University of Concepcion, Chile



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Ayanna Howard - howard.1727@osu.edu

- Dean, College of Engineering, OSU
- Board Director - Autodesk, Motorola Solutions
- Co-Founder – Zyrobotics, Black in Robotics
- Previous
 - Chair, School of Interactive Computing, Georgia Tech
 - NASA Robotics Researcher and Deputy Manager
- Research: Human-Robot Interaction and AI
- Funding Sources: NSF, NASA, AFOSR, Industry, Foundations



Life Balance:



@RobotSmarts

PRELIMINARIES



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What are your views on?

- What is your plan after graduation?
 - ☐ Look for a job in a company
 - ☐ Look for a job in a startup
 - ☐ Look for a job in a lab or academic setting
 - ☐ Continue in a PhD program
 - ☐ Take a long well-deserved vacation
- When are you graduating from the Master Program?
 - ☐ This spring
 - ☐ This year
 - ☐ Next year
- What do you expect from your professional experience?
 - ☐ Make impact
 - ☐ Learning
 - ☐ Recognition
 - ☐ Money
- What do you want as future career path?
 - ☐ Technical Leader
 - ☐ Individual Contributor
 - ☐ Business Executive
 - ☐ VP or CEO of a company
 - ☐ Create a startup
 - ☐ Astronaut



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Exercise: Turn And Talk To Your Neighbor

A. What is your plan after graduation?

- E.g., look for job in what area/industry, enroll in Ph.D., ...

B. What do you expect from your professional experience?

- E.g. Impact? Learning? Recognition? Money?

C. What do you want as your future career path?

- E.g., Technical Leader? Individual Contributor? Astronaut...?



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Agenda

- Possible career paths with an MS degree
- Preparing for the job market
- Preparing for interviewing
- Career growth and advancement



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CAREER PATHS



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Job Market, Opportunities and Tradeoffs

- **Computing skills are in high demand**
 - There are many job options with many tradeoffs
- **Established large/mid-size organizations**
 - Scale
 - Resources, roles, locations, career path
 - Potential drawback: Lost in the crowd
- **Small organizations**
 - Focus
 - Diverse and well-defined role
- **Start-ups**
 - Risk/reward/pace
 - Broad role
- **Freelance**
 - Autonomy
 - Diverse role

Employer

- Established company
- Startup company
- Research lab
- Government
- Self

Industry

- Technology
- Healthcare
- Finance
- Telco
- Automotive
- Retail
- Sports
- Entertainment
-

Position

- Software Engineer
- UX Designer
- Data Scientist
- Product Manager
- Product Evangelist
- Field Support
- PhD program



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Professional Ladder

		Career Level	Contribution and Impact	Expertise
Entry Level	Career	Engineer	Team Member / Leader in a product/project	Advanced knowledge and development skills in one area of contribution
		Senior Engineer	Leader in developing projects (research or technology)	Project-wise expert Proven technical capabilities
		Distinguished Engineer	Leader in developing large successful projects (research or technology)	Technical authority, impacts a business
		Fellow, Senior Fellow	Leader in developing successful product lines or technologies	Top technical leader in broad industry
		Director of Productor Business Development	Develop new or drive existing business lines	Product or Business expert Impacts business lines
		VP of Productor Business Development	Strategic direction for new or existing business lines	Product or Business expert Impacts broad business lines
		CEO/CTO	Business or technical leader, strategic decision maker	Business and technical strategy, visionary



Career Impact

- **Technology, product, business development**

- Contribute to company's products, client engagement, open source
- Contribute to intellectual property (patents)
- Develop new products
- Develop new business

- **Research**

- Engage in scientific discovery, collaborate with peers
- Develop creative thinking about technical solutions to problems
- Publish work, engaged with academia

- **Service**

- Departmental, Company-wide committees: hiring, engagement, promotion, mentoring, operational processes, ...
- Professional: conference committees, organizations



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HOW DO YOU PREPARE FOR THE JOB MARKET?

A Note About Internships

- **Provide opportunities for longer-term career networking**
 - When doing one, try to reach out beyond to learn and network
- **Teach a lot about specific positions at specific employers, also about more general job types, employer types and industries.**
- **Help refine your preferences and goals**
- **Often internships lead to offers for permanent jobs**



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Job Search Preparatory Homework

- **Identify goals and gaps that may exist**
- **The Internet and LinkedIn are your friends**
 - Have a portfolio / online presence
 - Build a Network
 - Contact recruiters
- **Have concrete work examples you can talk about**
- **Put yourself out there**
 - Workshops, meetups, events, career fairs, companies' campus visits



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Job Search Preparatory Homework

Craft Your Resume / CV

- Think who do you want to present yourself as
 - E.g., hacker, researcher, manager, designer
- It is OK to have different profiles for different targets
- Be concise
- How are you going to stand out?
- Ask for feedback
- LinkedIn can be you CV,
 - But should have one nonetheless



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SPECIAL CONSIDERATIONS FOR PERSONS WITH DISABILITIES

Special Considerations for Persons with Disabilities

- **America Disability Act (ADA)**

- Don't assume all organizations comply with ADA.
 - There is no ADA enforcement.

- **When to disclose disability?**

- At interview if physical (visible) disability,
- At job offer if invisible.

- **Some organizations actively seek persons with disabilities for certain product development tasks.**

- **Advocate for what you need to be successful in your career growth.**



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COVID-19 IMPACT ON JOB SEARCH



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COVID19 Impact on Job Search

- **Links**

- Be aware of potential challenges: openings, compensation
- These challenges may also be source of new opportunities
- Look out for articles related to this subject
 - <https://hiring.monster.com/employer-resources/recruiting-strategies/coronavirus-hiring-trends/>
 - <https://www.fastcompany.com/90575261/5-ways-job-seekers-can-stand-out-this-covid-19-winter>
 - <https://www.cnbc.com/2020/03/20/how-coronavirus-is-impacting-job-seekers.html>



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HOW DO YOU PREPARE FOR INTERVIEWING?



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Interviewing

- **Widely different opportunities**
 - Development, Research, Management, Design, Field Support, etc.
- **Never turn down a reasonable opportunity to interview.**
- **Some companies have interview prep material online.**



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Preparing for Interviewing

- **Prepare for the target position**
 - Behavioral questions: explain what you did in a specific situation.
 - Know your stuff: make sure you fully understand questions, ask clarifications if needed.
 - Talk through your answers, show your thought process.
 - “Perfect is the enemy of done.”
- **Rehearse interviews with your peers.**
- **If interviewers’ names are known, learn about them.**
- **If target area/project is known, learn about it.**
 - Current status, history, alternatives.
- **Show your interest for the position**
 - Have goals / ambition.



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You are the interviewer too!

- Be confident,
- Evaluate the organization as much as they are evaluating you,
- Gauge culture and climate through informal conversations,
- Can you see yourself working there?
- Can you talk with others that work there?
- Get information you may need to make a decision, if you get an offer,
- Think through timelines, be flexible,
- Have your list of questions.



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The Job Offer

- **Send follow-up/thank you notes.**
- **Stay in touch with recruiter!**
 - But do not look anxious.
- **Negotiate the job offer, if the opportunity arises.**
- **You can negotiate things other than salary.**
 - Stock/ stock options grants, vacation time, job assignment.
- **Know what you are worth.**
 - Consider your experience, research online, talk to peers.
- **Be clear on your willing to compromise.**
- **Use other job offers as leverage.**



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Offers and Negotiations

- This is your chance to set terms.

>>> DO NOT TO GIVE THE OPENING BID <<<

- Demonstrate why potential employer should meet your aspirations.
- Understand offer / bonuses.
- Starting compensation is not the **ONLY** deciding factor.



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HOW DO YOU GROW IN YOUR CAREER?



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Career: Performing and Growing

You and Your Manager

- Know expectations and opportunities of your position
- Define clear goals and set expectations for performance
- Communicate your progress

Being Good

- Align with the objectives of the organization
- Understand how to leverage team, and vice-versa
- Balance between being nice and making a point

Growth Path

- Be visible to peers, your manager, your manager's manager
- Actively participate in meetings (sit at the table, not in the back)
- Take on stretch assignments to grow visibility and capabilities
- Meet other people in the organization over lunch/coffee, job shadows
- Find or ask for a mentor (formal or informal)
- TAKE RISKS



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Career: More About Growth

- **You own your own career**
- **Be pro-active about your career plans**
 - You can change your mind any time
 - The first job most likely will not be your only job
- **Ask frequent, actionable feedback (manager, peers)**
- **Talk to people at the next level about what they do and what is expected**
- **Volunteer to take on roles above your current position**
- **Find advocates to build a case for promotion**



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Many successful executives have MS degrees

- Virginia "Ginni" Rometty, former IBM CEO -- BS in CE/EE
- Satya Nadella, Microsoft CEO – MS in CS, MBA
- Sundar Pichai, Google CEO – MS in Materials Science/Engineering, MBA
- Jeff Bezos, Amazon CEO – BS in EE/CS
- and many others

Successful business and technical leaders frequently come from MS level



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QUESTIONS?



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