MS Career Opportunities and Job Search

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• 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
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:
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
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?

C. What do you want as your future career path?
   – E.g., Technical Leader? Individual Contributor? Astronaut...?
Agenda

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

<table>
<thead>
<tr>
<th>Position</th>
<th>Industry</th>
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<tbody>
<tr>
<td>• Software Engineer</td>
<td>• Technology</td>
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<tr>
<td>• UX Designer</td>
<td>• Healthcare</td>
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<tr>
<td>• Data Scientist</td>
<td>• Finance</td>
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<tr>
<td>• Product Manager</td>
<td>• Telco</td>
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<td>• Product Evangelist</td>
<td>• Automotive</td>
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<td>• Field Support</td>
<td>• Retail</td>
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<td>• PhD program</td>
<td>• Sports</td>
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<td>• Entertainment</td>
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<td>• ….</td>
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<thead>
<tr>
<th>Employer</th>
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</thead>
<tbody>
<tr>
<td>• Established company</td>
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<tr>
<td>• Startup company</td>
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<tr>
<td>• Research lab</td>
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<tr>
<td>• Government</td>
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<tr>
<td>• Self</td>
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# Professional Ladder

## Career Level

<table>
<thead>
<tr>
<th>Career Level</th>
<th>Contribution and Impact</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer</td>
<td>Team Member / Leader in a product/project</td>
<td>Advanced knowledge and development skills in one area of contribution</td>
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<tr>
<td>Senior Engineer</td>
<td>Leader in developing projects (research or technology)</td>
<td>Project-wise expert</td>
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<tr>
<td></td>
<td></td>
<td>Proven technical capabilities</td>
</tr>
<tr>
<td>Distinguished Engineer</td>
<td>Leader in developing large successful projects (research or technology)</td>
<td>Technical authority, impacts a business</td>
</tr>
<tr>
<td>Fellow, Senior Fellow</td>
<td>Leader in developing successful product lines or technologies</td>
<td>Top technical leader in broad industry</td>
</tr>
<tr>
<td>Director of Product or Business</td>
<td>Develop new or drive existing business lines</td>
<td>Product or Business expert</td>
</tr>
<tr>
<td>Business Development</td>
<td></td>
<td>Impacts business lines</td>
</tr>
<tr>
<td>VP of Product or Business Development</td>
<td>Strategic direction for new or existing business lines</td>
<td>Product or Business expert</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Impacts broad business lines</td>
</tr>
<tr>
<td>CEO/CTO</td>
<td>Business or technical leader, strategic decision maker</td>
<td>Business and technical strategy, visionary</td>
</tr>
</tbody>
</table>
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
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
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
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
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.
COVID-19 IMPACT ON JOB SEARCH
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://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
HOW DO YOU PREPARE FOR INTERVIEWING?
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.
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.
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.
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.
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.
HOW DO YOU GROW IN YOUR CAREER?
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
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
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
QUESTIONS?