Industry + Academia

Raja Kushalnagar
Ayanna Howard
# About Raja Kushalnagar, J.D., LL.M, Ph.D.

## Now

<table>
<thead>
<tr>
<th>Role</th>
<th>Institution</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Information Technology</td>
<td>Gallaudet University</td>
<td>4 years</td>
</tr>
</tbody>
</table>

## Before

<table>
<thead>
<tr>
<th>Role</th>
<th>Institution</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Assistant Professor</td>
<td>Rochester Institute of Technology</td>
<td>6 years</td>
</tr>
<tr>
<td>MTS, Researcher</td>
<td>Bell Laboratories</td>
<td>3 years</td>
</tr>
</tbody>
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## Education

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree</th>
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<tbody>
<tr>
<td>University of Houston</td>
<td>PhD, CS and LL.M.</td>
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<tr>
<td>Angelo State University</td>
<td>BS, Applied Physics</td>
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</tbody>
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## Current Role

- Teach CS courses
- Manage grant-funded research
- Publish peer-review papers
Ayanna Howard

- Chair, School of Interactive Computing (IC)
- Linda J. and Mark C. Smith Endowed Professor
- CTO/Founder, Zyrobotics
- Previous: NASA Robotics Researcher
- Research: Human-Robot Interaction and AI

@robotsmarts
Industry

- Open-ended research: part of a research team
- Directed research: part of a product team
- Research engineering
- Product software engineering
- Product/Project Management
- Design
- Founder
Academia

- Research-oriented Professor
  - Tenure vs non-tenure track
- Teaching-oriented Professor
  - PUIs
  - Non-tenure track (lecturer)
- Administration (some “Dean” type of positions are for recent PhD grads)
- Research scientist/staff
- Public vs private university
Turn and Talk to Your Neighbor

What is your plan?
Industry vs Academia vs Undecided?

Why?
How do you enjoy spending your time?
What is Important to You?

Must-haves vs. Nice-to-haves?

- Stability vs. Change?
- Excelling in Your Career?
- Having Nice Things?
- Physical Fitness?
- Schedule Flexibility?
- Minimizing Effort vs. Being Challenged?
- Supporting Others?
- Living Near Relatives?
- Having a Family?
- Control of Technical Agenda?
- Visibility?
Does What You’re Doing Align With What’s Important to You?

- What you value most could change over time
- Absolutely no one is in your exact situation
- A PhD gives you options
- Be true to yourself and your values
- Don’t be afraid to course correct
The Engineering Ladder

Implications: Pay, Expectations
Check levels.fyi

New PhD Grad
New BS Grad

8. Principal Engineer
7. Senior Staff Engineer
6. Staff Engineer
5. Senior Engineer
Engineer 4
Engineer 3

Up or Out within 3 Years
Moving Between Industry and Academia

From University to Industry
- Must build products
- Establish visibility and knowledge in industry
- Need to pass a technical interview (coding, complexity)

From Industry to University
- Must continue publishing
- Establish visibility and reputation in research community
- Need to pass an academic interview (presentation, strong publication record)
All Choices are Valid!

- Do what you love
- If you don’t love what you’re doing, do something else
- A PhD gives you that option
- Take ownership of what you do now and what you want to do next
Q&A