

CRAFTING A SUCCESSFUL ENGINEERING CAREER



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ENGINEERING AS A CAREER

- What is your Goal in life ?
- Why did you join Engineering ?



SOME REASONS FOR JOINING ENGINEERING

- “Parents wanted me to be an engineer”
- “After 12th either you become doctor or Engineer. I was not cut out for doctor so I choose engineering . Nor did I want to do BSc.”
- Challenges, Curiosity, Excitement
- Money, Travel, Status
- To make a difference in the world, to change the way things work
- Want a job in big company
- “I want to start something of my own (entrepreneurship)”



HOW DO YOU DEFINE SUCCESS ?

- Do you want to get rich ?
- Do you just want a job with decent pay ?
- Do you want to change the world ?

- You may go 10-20 years without answering these questions but eventually you have to
- Set yourself for Success according to your own metrics from the start



NO ONE FORMULA FOR SUCCESS

- Engineering is a field that requires many people with different skills to work together to solve complex problems in a simple way.
- Like best engineering problems, there's no single algorithm to follow
 - But there are “Best Practices”
 - There are Things To Avoid
- Do not make all mistakes yourself
 - Learning from other's errors is much better



GETTING STARTED

- What are you passionate about? Do that.
 - Mere competence will never trump real passion
 - Match your skills, interest to what world wants
- Your answers will change with time
 - Let career evolve
 - You can find career value in any job
 - Just do outstanding work no matter the task
 - It is mostly the choice you make not talent or IQ



WHICH JOB TO TAKE ?

- Look 20 years out & place your career as a bet
 - Which technologies or business domains are most powerful/promising?
 - Biotech, IT, Clean Energy, Health Care, Telecom, Micro Finance
- Which line up with your personal belief system?
 - Defense, medicine, consumer, corporate, academia



STARTUPS V/S BIG CORPORATE

- Good idea to do both over course of your career
- Startups are easier when you're young
 - More time, more energy, less to lose
 - Startups can sometimes change world explosively
 - But most fail
 - Less overall stability
- Big companies have more opportunities to change world incrementally
 - Remember that those increments can add up over time
 - More stable, but sometimes that also means boring
- Both can be exhilarating, and both can be very frustrating



GETTING HIRED

- Where to work
 - Weight these factors heavily:
 - Do you believe in the mission
 - How outstanding is the team
 - How well-run is the company
 - Would this position leverage your strengths yet demand intellectual growth
 - Geography, local culture, educational opportunities
- Then consider salary, bonuses, stock, benefits



YOUR FIRST JOB

- No matter what it is, become best in world at it
 - Plan on 2-3 years to get really comfortable & productive
- Work as hard as you can
 - You are setting your own reputation & trajectory
 - Only Top Performers have choice of options for next project
 - Find mentors & role models (don't struggle in silence)
- Don't Let Your Team Down
 - Know when to stand your ground v/s which battles aren't worth fighting
- Settle for nothing less than outstanding work.



BUILDING YOUR CAREER

- Focus on YOU
 - Know your career path
 - Individual Contributor v/s Management
 - Technology changes rapidly, keep yourself updated
 - Look for trainings, attend workshops
- Focus on the Company
 - Align your career to what the company cares about



BUILDING YOUR CAREER - RESOURCES

- Your Alma Matter – stay connected
- IEEE/ACM – Participate and Network
- Books – Read outside your specialty
- Balancing Work and Home



GETTING AHEAD IN YOUR JOB

- Communications = Influence = Promotions
 - Writing
 - Presentations
- Corporate/team culture
 - Overpromising v/s over delivering
 - Team play v/s getting what's yours
 - Detecting /avoiding burnout
 - Use existing solutions where possible, innovate where necessary
- Legal Stuff
 - Take patents, IP very seriously; wording matters



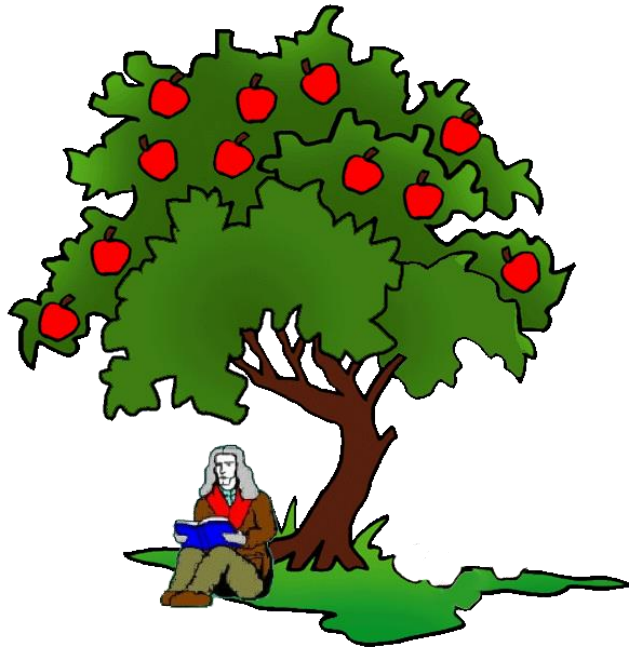
GETTING AHEAD IN YOUR CAREER

- Do outstanding work and trust that rewards will follow
- How ? Work with people who do outstanding work
- Be visible outside your own company
 - Good for company, good for industry, good for you
 - Write papers, attend conferences, do peer reviews
 - Be active in IEEE/ACM



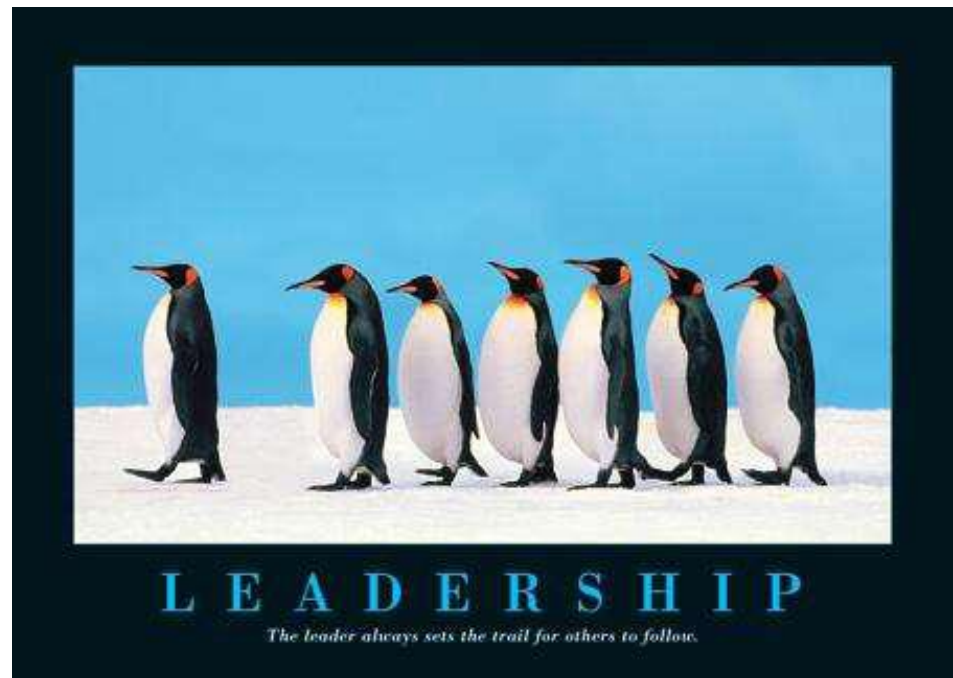
TECHNICAL LEADERSHIP

- Take on hard challenging problems at work
- Be a go-to person
- Gain depth in technology / business domain at your job



LEADERSHIP

- 360 degree Leadership
 - ✓ Leading above, below and at your level
- Know your strengths and weakness
 - ✓ Leverage strengths
 - ✓ Fill in weaknesses



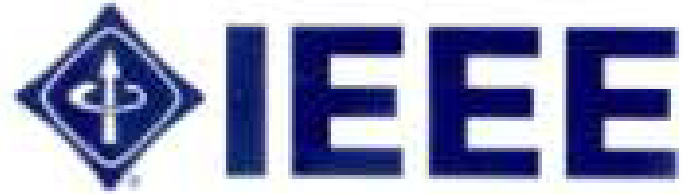
DEALING WITH FAILURES

- If you never fail you aren't trying hard enough
- Not all failures equally forgivable
 - ✓ Well-conceived risks: good
- Learn from your failures
 - ✓ Do not blame others
 - ✓ Own up and take responsibility



EDUCATION

- B.Tech, M.Tech/MBA, PhD
 - PhD required for research
- Stay viable & current
 - Ongoing education/training
 - Go to conferences, monitor what universities are working on
 - IEEE membership & participation
 - Review papers, submit papers, attend conferences, be active in local organizations (networking & cont. educ.)
- Don't give up your non-engineering interests
 - They will inform your engineering
 - They'll keep you connected to the non-techie world
 - They'll keep you from burning out



SUCCESSFUL ENGINEERING CAREER

