

# Opportunities after Higher Education

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CENTRE FOR  
NETWORKED INTELLIGENCE  
Indian Institute of Science



# Career Paths

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- Government
  - Civil and engineering services examination
  - Public Sector Undertakings
- Industry
  - Bachelors, Masters, and PhD level positions
- Academia
  - Post-doctoral fellows
  - Faculty positions

# Government

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- Civil services
  - All India services: IAS, IPS, IFS, IRS, IPoS etc.
  - State services
- Engineering services
  - All India and state level services
- Union PSC, State PSC, SSC
  - Civil and engineering services exams at various levels
  - Prelims, mains, and interview
- Banking exams
  - PO or clerical level examinations
- Defence board
  - CDS, AFCAT
- Railway recruitment board

# Public Sector Undertakings

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- Research based PSUs
  - DRDO, ISRO, BARC
- Operation based PSUs
  - ONGC, IOCL, PGCIL, NTPC, SAIL, CIL, GAIL, NMDC etc.
- Entrance examination
  - GATE (Graduate Aptitude Test in Engineering) for most of them
  - ISRO and BARC have their own entrance test
- Post graduation opportunity after PSU
  - Possible MTech from IISc/IIT

# Industry

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- Civil
  - Civil, Structures, Construction
  - Transportation, Geotechnical, Environmental, Urban planning
- Mechanical
  - Mechanical, Design, Manufacturing, HVAC, Quality Control, Product Development
  - Robotics, Automation, Automotive, Aerospace, Supply Chain
- Electrical
  - Power systems, Control, Instrumentation, Renewal energy, Smart Grid
  - Semiconductors, Nanoscience, Materials
  - RF, VLSI
  - Network systems, Embedded systems, Hardware
- CS
  - Software, Front-end, Back-end, Full-stack, Mobile app, Web, QA, Database, Compilers, OS
  - AI/ML, Data Science, Cloud

# Industry

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- After BTech
  - Entry level positions in core industry
  - Software/IT based companies
- After MTech
  - Specialized positions in core industry
  - Software/IT based industry that utilizes the core skills learned
- After BTech/MTech/PhD and MBA
  - Techno-managerial positions
  - Analytics, finance, banking
- After PhD
  - Corporate R&D positions in core industry
  - Research scientist in Govt or Industry Research Laboratories
- Entrepreneurship

# Academia

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- Eligibility
  - Ph.D. and some post-doctoral experience
- Expectations
  - Knowledge generation from research leading to publication at top venues in the core area
  - Knowledge dissemination by teaching graduate students
  - Nurturing the graduate students to be researchers of the future
  - Collaborating and consulting with the govt and the industry in core areas
  - Service to the University, a self-governing entity

# How to choose?

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- Know yourself
  - Interests, Values, Traits
- Motivations
  - Salary, Benefits, Flexibility, Autonomy, Growth, Balance
- Goals
  - Short-term, Long-term
- Explore
  - Different trade-offs in different sectors
  - Different industries in a sector with different growth potential
  - Internship opportunities



# Apply

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- Preparation
  - Resume
  - Written Test
  - Interviews
- Modes
  - Campus placement
  - Internships
  - Professional contacts

Questions?