



WE SEE

TOMORROW



**LUDDY**

SCHOOL OF INFORMATICS, COMPUTING, AND ENGINEERING

**UNDERGRADUATE PROGRAMS**



**YOU'VE ENVISIONED TOMORROW.**

**YOUR TOMORROW.**

**THE WORLD'S TOMORROW.**

**LET'S MAKE IT HAPPEN.**

**WE'LL SHOW YOU HOW.**

**WE SEE WHAT TOMORROW CAN BE.**

**WE SHAPE IT EVERY DAY.**

**WHAT WILL YOUR TOMORROW BE?**

*“Collaborating with Luddy faculty has been an incredible opportunity, and I do not think I could have asked for better mentors and cheerleaders. They have shaped my educational experience at IU and have had an immeasurable, positive impact on my life.”*

**Katie Spoon**

'19 B.S./M.S. in Computer Science, Software Engineer, IBM Research



*“Technology manages to enhance our lives everyday. Luddy has given me the ability to tackle many problems with innovative solutions.”*

**Mouhammed Camara**

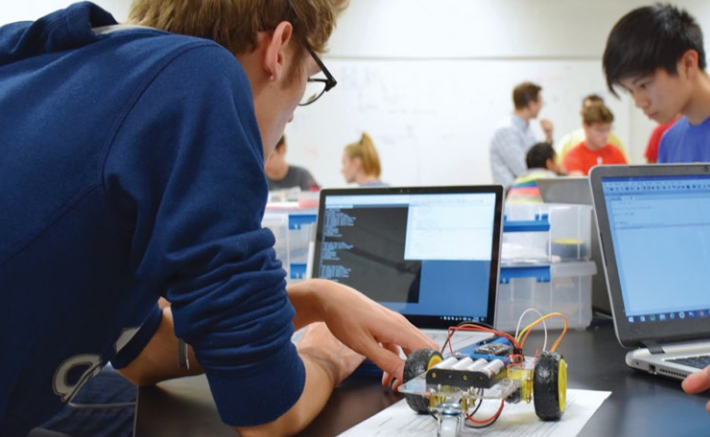
'19 B.S. in Informatics, Software Engineer, JP Morgan Chase

*“ISE allowed me to approach engineering from an entirely different perspective in the workplace. Already having a grasp of machine learning and the fundamentals of AI has made me unique and valuable as an undergraduate intern.”*

**Jonathan Krzesniak**

'20 B.S. in Intelligent Systems Engineering, Intern, Naval Surface Warfare Center, Crane Division





# UNDERGRADUATE PROGRAMS

Our programs are structured so that you receive a well-rounded, technical education. We also offer a variety of master's and doctoral programs, including five accelerated master's programs. Undergraduates can pursue the following:

- Bachelor of Science in Computer Science
- Bachelor of Science in Cybersecurity and Global Policy
- Bachelor of Science in Data Science
- Bachelor of Science in Informatics
- Bachelor of Science in Intelligent Systems Engineering
- Certificate in Entrepreneurship
- Certificate in Informatics
- Minor in Animal Computer Interaction
- Minor in Computer Science
- Minor in Human-Centered Computing
- Minor in Human-Computer Interaction/Design
- Minor in Informatics
- Minor in Information Technology
- Minor in Intelligence Studies
- Minor in Security Informatics
- Minor in Virtual Reality



**1,900+**  
undergraduate  
students



**500+**  
students participated in  
experiential learning  
(research, study abroad, or  
service learning)



**5** majors, **9** minors  
and **40+**  
focus areas

# WHAT INTERESTS YOU?

We have options—**MINORS**, **SPECIALIZATIONS**, **COGNATES**, and **CONCENTRATIONS**—to fit your interests.

## COMPUTER SCIENCE

- S** Artificial Intelligence
- M** Computer Science
- S** Data Science
- S** Foundations of Computer Science
- S** Game Development
- M** Information Technology
- S** Programming Languages
- S** Security
- S** Software Engineering
- S** Systems

## CYBERSECURITY AND GLOBAL POLICY

### DATA SCIENCE

- S** Biological and Health Science
- S** Data Science Design
- S** Data Systems
- S** Foundational Data Science
- S** Network and Applied Data Science

## INFORMATICS

- C** **M** Animal Computer Interaction
- C** Biology
- C** Business
- C** Chemistry
- C** Cognitive Science
- C** Computer Art
- C** Computer Science
- C** Economics
- C** Environmental Management
- C** Game Design
- C** Geography
- C** Graphic Design
- C** Health Systems Administration
- C** **M** Human-Centered Computing
- C** **M** Human-Computer Interaction/Design
- C** Individualized—Consult with Your Advisor
- M** Informatics
- C** Linguistics
- C** Mathematics
- C** Media
- C** Medical Sciences
- C** Music
- C** Philosophy of Mind and Cognition
- C** Policy Studies
- C** Pre-Health Professions
- C** Psychology
- C** Public Finance
- C** Public Health
- C** **M** Security Informatics
- C** Urban Affairs
- C** **M** Virtual Reality

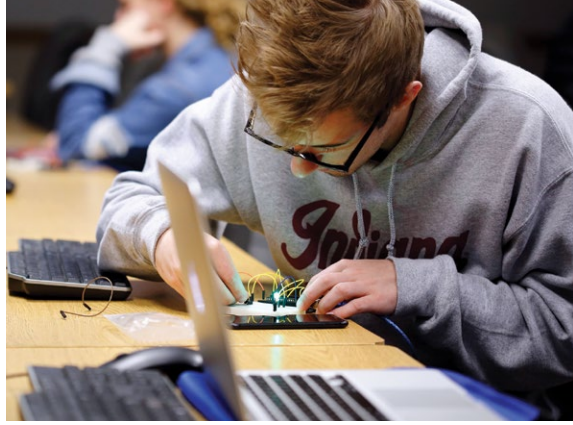
## INFORMATION AND LIBRARY SCIENCE

- M** Intelligence Studies

## INTELLIGENT SYSTEMS ENGINEERING

- N** Bioengineering
- N** Computer Engineering/Cyber-Physical Systems
- N** Molecular and Nanoscale Engineering

- M** Minor
- S** Specialization
- C** Cognate
- N** Concentration



# MAP YOUR FUTURE

Our programs provide a core foundation of training built around courses in computational methods, programming languages, systems design and development, data analysis, professional development, and entrepreneurship. Each program builds upon this foundation to provide its unique perspective on how technology can be used to build a better future. Representative courses for the five programs include:

## COMPUTER SCIENCE

- Introduction to Computers and Programming \*
- Introduction to Computer Science \*
- Introduction to Software Systems \*
- Discrete Structures for Computer Science \*
- Programming Languages
- Computer Structures
- Data Structures \*
- Introduction to Artificial Intelligence
- Introduction to Data Analysis and Mining
- Introduction to Algorithm Design and Analysis
- Security for Networked Systems
- Introduction to Operating Systems
- Software Engineering for Information Systems
- Career Development for Computer Science Majors \*

## CYBERSECURITY AND GLOBAL POLICY

- Introduction to Informatics \*
- Mathematical Foundations of Informatics \*
- Introduction to International Studies \*
- Culture in the Digital Age \*
- Introduction to International Law and Legal Institutions \*
- Origin and Evolution of International Law \*
- Diplomacy, Security, Governance \*
- Analytical Foundations of Security \*
- Introduction to the Mathematics of Cybersecurity \*
- Introduction to International Relations \*
- Information Infrastructure \*
- Systems Programming with C and Unix \*
- Ethics and Decision-Making in International Politics \*
- Security for Networked Systems \*
- Systems & Protocol Security & Informational Assurance \*
- Cybersecurity, Policy, and Governance \*

## DATA SCIENCE

- Data Fluency \*
- Introduction to Statistics \*
- Problem Solving using Data \*
- Data Representation and Processing \*
- Data Modeling and Inference \*
- Big Data Analytics \*
- Data Science Capstone \*

## INFORMATICS

- Introduction to Informatics \*
- Mathematical Foundations of Informatics \*
- Social Informatics \*
- Information Infrastructure \*
- Human Computer Interaction/ Design \*
- Organizational Informatics
- Information Representation \*
- Application Development
- Virtual Reality Design
- Introduction to Health Informatics
- Data Visualization
- Search Informatics
- Technology Innovation/ Entrepreneurship

- Computer and Information Ethics
- Design and Development of an Information System \*
- Career Development for Informatics Majors \*

## INTELLIGENT SYSTEMS ENGINEERING

- Innovation and Design \*
- Engineering Computing Architectures \*
- Software Systems Engineering \*
- Computer Systems Engineering \*
- Engineering Cyber-Physical Systems \*
- Intelligent Systems \*
- Systems, Signals, and Control \*
- Engineering Professionalization and Ethics \*
- Engineering Capstone Design \*
- Career Development for Intelligent System Engineering Majors \*

\* Core course

## LUDDY FACILITIES

In 2018, Luddy opened its spectacular new home, Luddy Hall. The 124,000-square-foot Luddy Hall encourages collaboration and community while supporting a culture of research and innovation.

Key features of the building include a large fabrication lab that boasts some of the best views of our beautiful campus; Amatria, a sentient sculpture at the top of the grand staircase; and the Shoemaker Innovation Center (aka The Shoebox), a student-focused space that supports entrepreneurship at IU.



# TO EXCEL TOMORROW, GET EXPERIENCE TODAY



## INTERNSHIPS

Test-drive your future career. You'll practice using your skills, make invaluable contacts, and refine your career plans.



## RESEARCH

Work with a faculty mentor and Ph.D. student in an area you want to explore, such as high-performance computing or social informatics. Research is great preparation for your career or graduate studies, and can provide a foundation for prestigious research awards.



## OVERSEAS STUDY

Gain international perspective in one of IU's 300-plus overseas study programs, or go on our trip to India to learn about IT in emerging markets.



## SERVICE

Obtain real-world experience while advising local nonprofits on technology in the Serve IT clinic, or spark the next generation's imagination during our Teach IT programs at the Boys & Girls Club and Girls Inc.



## HANDS-ON COURSEWORK

Prepare yourself to solve problems for a living by solving problems as a student. You'll do just that through class projects, which will teach you to design, program, and build with the best.



# LAUNCH A CAREER

Our degrees can take you wherever you want to go whether it's a Fortune 500, non-profit, or a start-up company. If you want to start your own company, we'll give you the tools to do that, too. Our dedicated career services staff will help you each step of the way. How bright is your future? Take a look at our class of 2018 hiring statistics, compiled six months after graduation.

## TOP HIRING COMPANIES



**\$64,200**

### AVERAGE STARTING SALARY

\$61,200 for informatics majors  
\$76,500 for computer science majors  
Salary data for cybersecurity and global policy, data science, and intelligent systems engineering majors will be available after the first cohorts graduate.



**95%**

**SUCCESS RATE** for undergrad students  
(employed or accepted to grad school)



**420+**

**UNIQUE ORGANIZATIONS** hire  
our undergraduates for internships and  
full-time positions



# FIND YOUR COMMUNITY

## HELPING YOU SUCCEED ✨

You'll find an active, inclusive, and supportive community within the Luddy School. From academic programs to student leadership positions, you will find all the support you need.

The Luddy School of Informatics, Computing, and Engineering works hard to help our students and graduates succeed. We're committed to diversity and inclusion in our programs, our people, and our community. There's something for everyone here. If you want your voice to be heard, join one of our student groups. You can become part of the community in the way that fits you best, and if we don't have it, you can create it!

## LIVING LEARNING CENTER ✨

The Luddy Living Learning Center is the ideal place for first-year students to live and interact with other students pursuing degrees at Luddy. Students in this community form lasting relationships and enhance their leadership skills. Increased opportunities for mentoring, interacting with faculty, and networking with employers help smooth the transition into collegiate life and give you a head start on your future.





# INDIANA UNIVERSITY

## LUDDY SCHOOL OF INFORMATICS, COMPUTING, AND ENGINEERING

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