



# School of Engineering & Applied Science, Master's Degree Candidates

## 2019 Career Plans Survey Report

### Methodology

Career Services at the University of Pennsylvania annually surveys graduating students to provide a snapshot of their post-graduation plans.

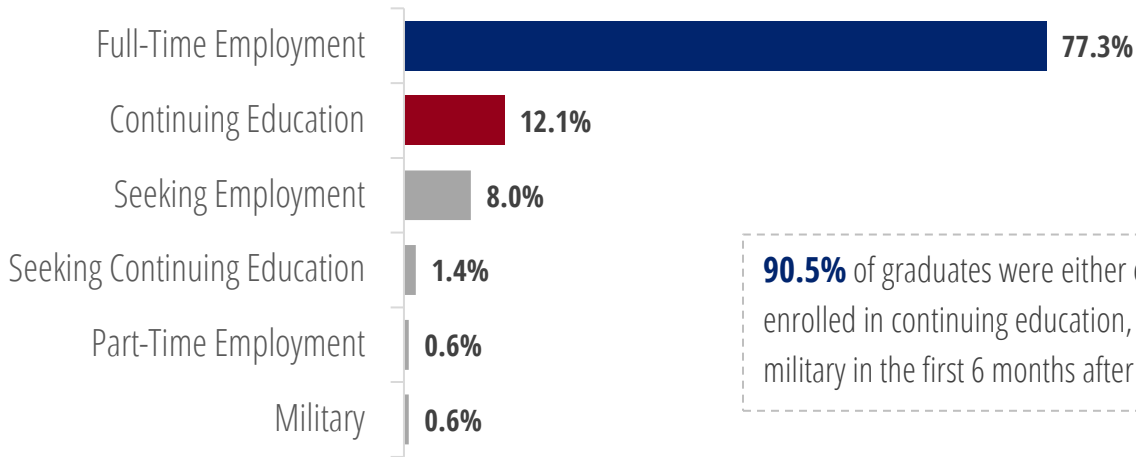
This report looks at 629 graduates from the schools listed above who received their degrees between August 2018–May 2019. Students were surveyed up to six months from their graduation date, with a 41% response rate. Additional information was then collected via LinkedIn and other sources, bringing the total **knowledge rate** up to **55%**, a total of 257 known graduate outcomes.

### Sections

1. **Post-Graduation Outcomes**
2. **Full-Time Employment**
  - a. Job Offers & Hiring Timeline
  - b. Industries & Job Functions
  - c. Geography & International Students
  - d. Salaries by Industry & Job Function
3. **Positions Accepted by Program**

# Post-Graduation Plans

348 responses

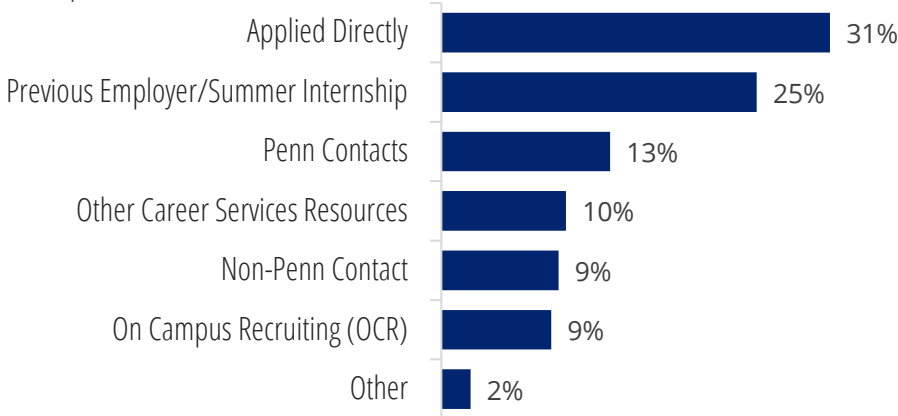


90.5% of graduates were either employed, enrolled in continuing education, or serving in the military in the first 6 months after graduation.

# Full-Time Employment

## Job Offer Source

171 responses

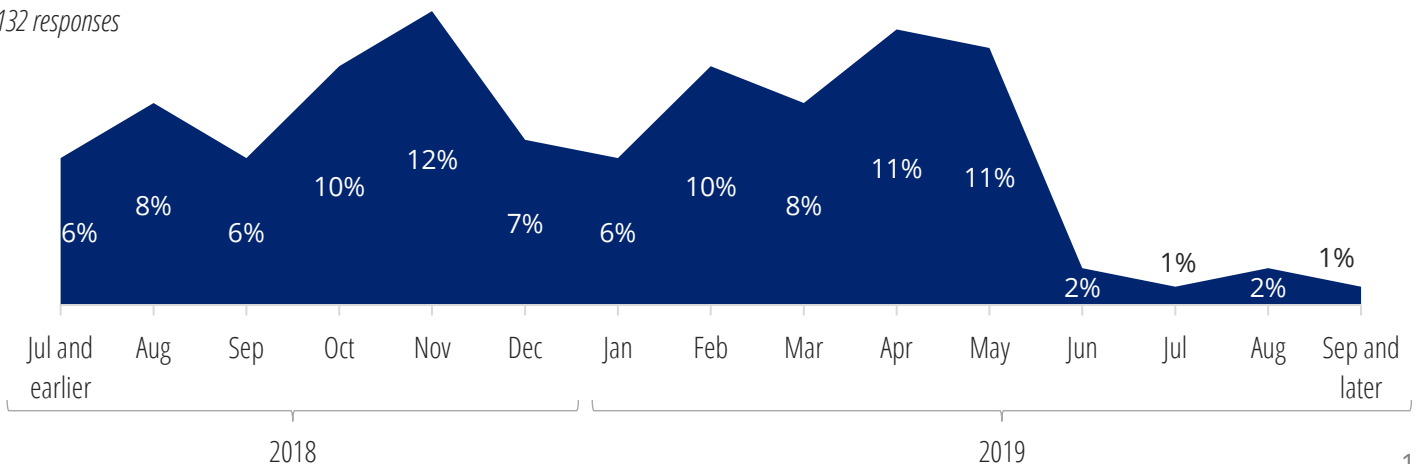


## Top Employers

- Amazon (20)
- Google, Inc. (19)
- Microsoft (14)
- Facebook (9)
- Huawei Technologies, Inc. (6)
- Oracle (6)
- Apple (5)
- Airbnb (4)
- Merck & Co., Inc. (4)
- Micron Technology Inc. (4)
- NVIDIA Corporation (4)
- University of Pennsylvania (4)

## Date of Job Offer

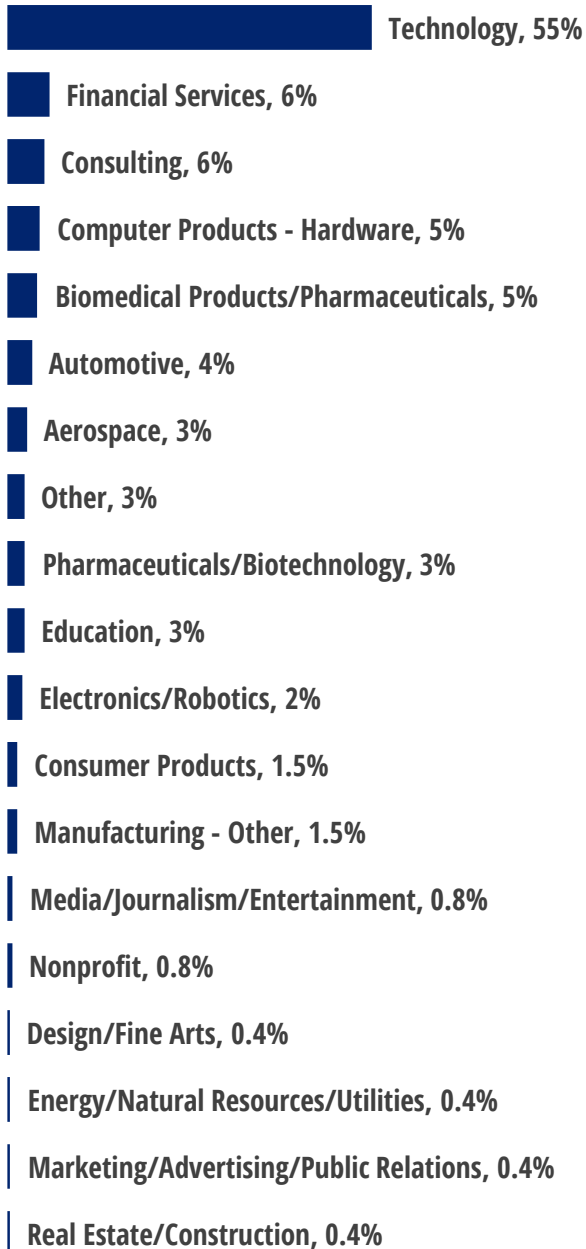
132 responses



# Full-Time Employment

## Employer by Industry

265 responses



## Job Function

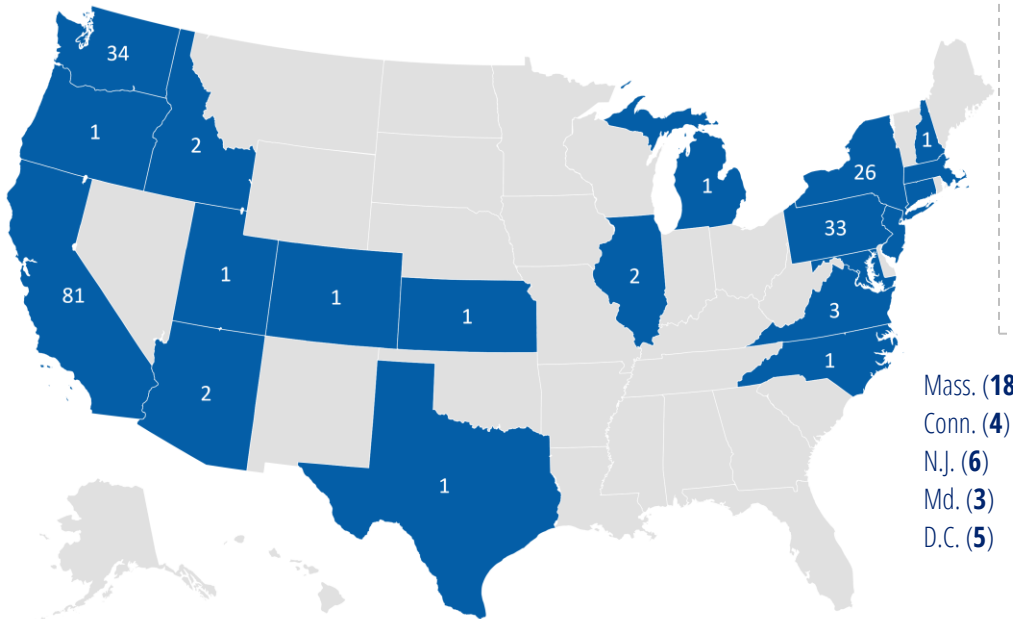
189 responses



# Full-Time Employment

## Employment by State

227 responses



**Internationally**

**31 students in 4 countries**

12% of those who reported their location

- China (28)
- Denmark
- Hong Kong
- Saudi Arabia

- Mass. (18)
- Conn. (4)
- N.J. (6)
- Md. (3)
- D.C. (5)

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## International Students

Of the 100 survey respondents who identified as foreign nationals, 86 reported they were employed full-time and 69 reported they were employed full-time in the U.S.

### U.S. Employers of Foreign Nationals

- |                             |                        |                              |                               |
|-----------------------------|------------------------|------------------------------|-------------------------------|
| Airbnb                      | Cisco                  | Nokia Bell Labs              | Vistar Media                  |
| Amazon                      | Deloitte               | Nutanix                      | VMware, Inc.                  |
| Appfolio                    | Dropbox                | NVIDIA Corporation           | Wayfair                       |
| Apple                       | Facebook               | Oracle                       | Waymo                         |
| Artech                      | Formlabs               | Pacific Planning Group, Inc. | Weill Cornell Medical College |
| Asana                       | Google, Inc.           | PayPal                       | Wombat Studio, Inc.           |
| Aurora Flight Sciences      | Hughes                 | Peloton                      | Xenon Health                  |
| Axiom Healthcare Strategies | IQVIA                  | The Wistar Institute         |                               |
| BlackRock                   | Lucid Motors           | University of Pennsylvania   |                               |
| Blueprint                   | Micron Technology Inc. | Vanguard                     |                               |
| Brain Corporation           | Microsoft              | Varian                       |                               |

# Full-Time Employment

	Respondents	Median	Range	
Overall Salaries	163	\$105,000	\$30,000	\$180,000
Signing Bonuses	112	\$20,000	\$1,000	\$120,000

## Salaries by Industry

	Reporting	Median	Range	
Aerospace	6	\$93,500	\$78,965	\$115,000
Automotive	7	\$90,000	\$30,000	\$165,000
Biomedical Products/Pharmaceuticals	4	\$72,500	\$60,000	\$90,000
Computer Products - Hardware	10	\$93,125	\$65,000	\$109,000
Consulting	9	\$77,500	\$65,000	\$90,000
Healthcare/Life Sciences	4	\$74,250	\$65,000	\$90,000
Management Consulting	5	\$77,500	\$70,000	\$90,000
Consumer Products	3	\$75,000	\$70,000	\$84,000
Design/Fine Arts	1	-	-	-
Education	4	\$55,625	\$45,000	\$93,600
Higher Education - Non-Research	1	-	-	-
Higher Education - Research Lab	3	\$61,249	\$45,000	\$93,600
Electronics/Robotics	1	-	-	-
Energy/Natural Resources/Utilities	1	-	-	-
Financial Services	13	\$90,000	\$60,000	\$175,000
Diversified Financial Services	3	\$99,000	\$83,000	\$106,000
Hedge Fund	2	-	-	-
Investment Banking/Brokerage	3	\$79,656	\$60,000	\$85,000
Investment Management/Counsel	4	\$95,000	\$68,000	\$150,000
Private Equity	1	-	-	-
Manufacturing - Other	3	\$92,000	\$83,900	\$92,500
Marketing/Advertising/Public Relations	1	-	-	-
Media/Journalism/Entertainment	2	-	-	-
Other	4	\$88,500	\$82,000	\$180,000
Pharmaceuticals/Biotechnology	6	\$70,000	\$62,400	\$90,000
Real Estate/Construction	1	-	-	-
Technology	86	\$120,000	\$45,000	\$155,000

*\*Fewer than 3 reported salaries not published to maintain confidentiality.*

# Full-Time Employment

## Salaries by Job Function

	Reporting	Median	Range	
Administration	1	-	-	-
Consulting	8	\$76,750	\$65,000	\$90,000
Management/Strategy	7	\$75,000	\$65,000	\$90,000
Research	1	-	-	-
Data Analytics	9	\$115,000	\$62,400	\$150,000
Data Analytics	3	\$125,000	\$85,000	\$150,000
Data Science	6	\$112,500	\$62,400	\$145,000
Finance	4	\$82,328	\$60,000	\$175,000
Investment Banking	2	-	-	-
Trading	2	-	-	-
Game Development	2	-	-	-
Management	3	\$50,000	\$30,000	\$90,000
Manufacturing	17	\$83,900	\$36,000	\$140,000
Other	1	-	-	-
Product/Project Management (Technology)	5	\$108,000	\$75,000	\$152,000
Research & Development	2	-	-	-
Research	7	\$61,249	\$45,000	\$75,000
Biomedical	3	\$65,000	\$61,249	\$65,000
Other	4	\$55,000	\$45,000	\$75,000
Sales	1	-	-	-
Software Development/Engineering	83	\$115,000	\$45,000	\$180,000
Systems Engineering/Analysis	4	\$86,500	\$65,000	\$95,000
Technology Analysis	4	\$117,500	\$77,500	\$130,000
Testing/Quality/Evaluation	4	\$80,000	\$70,000	\$92,500

*\*Fewer than 3 reported salaries not published to maintain confidentiality.*

## **Positions Accepted by Program**

Bioengineering

Biotechnology (MBiotech)

Chemical & Biomolecular Engineering

Computer & Information Science

Computer & Information Technology (MCIT)

Computer Graphics & Game Technology

Data Science

Electrical Engineering

Embedded Systems

Integrated Product Design

Integrated Product Design (MSE)

Materials Science & Engineering

Mechanical Engineering & Applied Mechanics

Nanotechnology

Robotics

Scientific Computing

Systems Engineering

# Positions Accepted by Program

Positions accepted by 2019 graduates are listed by program and include employer name and position title (where known).

## BIOENGINEERING

### Full-Time Employment

- Accenture**, Technology Analyst
- Amazon**, Software Development Engineer \*
- Back Bay Life Science Advisors**, Analyst
- Consumer Reports**, Senior Analyst
- Cross Properties**, Leasing Consultant +
- Decision Resources Group Consulting**, Consulting Business Associate
- DePuy Synthes**, Complaint Analyst
- Galileo**, Backend Software Engineer +
- GEP**, Business Consultant
- Google, Inc.**, Software Engineer \*
- IQVIA**, Associate Consultant
- Janssen**, Associate Scientist
- Johnson & Johnson Family of Companies**, Research & Development Leadership and Development Program Engineer
- Merck & Co., Inc.**, Data Scientist
- Merck & Co., Inc.**, Operations Specialist
- Meso Scale Diagnostics**, Research Associate
- Navigant**, Consultant
- The Boston Consulting Group**, Consulting Business Associate ○
- Varian**, Program Analyst +

\* *Dual Degree Recipient*  
 ○ *SEAS Bachelor's & Master's Degree*  
 + *Continuing Previous Employment*

## BIOTECHNOLOGY (MBIOTECH)

### Full-Time Employment

- Ampel BioSolutions**
- Axiom Healthcare Strategies**
- Blueprint**
- GlaxoSmithKline**, Associate Scientist (2)
- Google, Inc.**, Software Developer \*
- IQVIA**, Analyst (Management Consulting)
- Johnson & Johnson Family of Companies**, Quality Control Chemist +
- Merck & Co., Inc.**, Senior Specialist Oncology Market Research and Analytics
- MTS Health Partners**, Investment Banking Analyst +
- Novo Nordisk**, Regulatory Affairs Graduate
- The Wistar Institute**, Lab Technician +
- The Wistar Institute**, Bioinformatics Technician



**Weill Cornell Medical College**, Bioinformatics Analyst +

## CHEMICAL & BIOMOLECULAR ENGINEERING

### Full-Time Employment

**biyadi**

**Critical Path Institute (C-Path)**, Data Analyst

**Johnson & Johnson Family of Companies**, Associate Scientist

**SABIC**, Scientist

\* *Dual Degree Recipient*

o *SEAS Bachelor's & Master's Degree*

+ *Continuing Previous Employment*

## COMPUTER & INFORMATION SCIENCE

### Full-Time Employment

**Airbnb**, Software Developer \*

**Airbnb**, Software Engineer

**Amazon**, Software Developer

**Amazon**, Software Development Engineer (2)

**Amazon**, Software Engineer (2)

**Amazon**

**Apple**, Software Engineer

**Aptible**, Senior Software Engineer

**Asana**, Software Engineer +o

**BlackRock**, Software Engineer

**Bolt**, Software Engineer

**Chatham Financial**, Software Engineer o

**Cisco**, Software Engineer

**Citadel LLC**, Software Engineer o

**Confluent**, Backend Software Engineer o

**Facebook**, Software Engineer

**Facebook**, Software Engineer o

**Google, Inc.**, Software Development Engineer +

**Google, Inc.**, Software Engineer o

**Google, Inc.**, Software Engineer +

**Google, Inc.**, Software Engineer (2)

**Google, Inc.** \*

**Google, Inc.** (2)

**Jane Street**, Quantitative Trader (Finance) o

**Microsoft**, Software Development Engineer

**Microsoft**, Software Engineer (2)

**Microsoft**

**Momenta** \*

**Nutanix**, Technical Staff

**Nutanix**  
**NVIDIA Corporation,**  
**Oracle,** Software Developer  
**Oracle,** Software Engineer  
**PayPal,** Software Developer 2 +  
**Uber,** Software Engineer  
**VMware, Inc.,** Software Developer +  
**Walmart Labs,** Data Scientist

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 o *SEAS Bachelor's & Master's Degree*  
 + *Continuing Previous Employment*

## COMPUTER & INFORMATION TECHNOLOGY (MCIT)

### Full-Time Employment

**Airbnb,** Software Developer \*  
**Airbnb**  
**Amazon,** Software Developer  
**Amazon,** Software Development Engineer \* (2)  
**Amazon,** Sr. Product Manager - Technical  
**Amazon** \*  
**Appfolio** \*  
**Bloomberg,** Software Engineer  
**Capital One,** Data Engineer  
**Center for Strategic and International Studies,** RA  
**Deloitte**  
**Dropbox,** Software Engineer \*  
**Facebook,** Software Engineer \*  
**Facebook**  
**Galileo Processing,** Strategy Manager +  
**Google, Inc.,** Software Developer \*  
**Google, Inc.,** Software Engineer \* (3)  
**Google, Inc.,** Software Engineer +  
**Google, Inc.** \* (2)  
**IBM**  
**JRI America, Inc.,** Software Developer  
**Kepler Group**  
**Mark Cuban Companies**  
**Merck & Co., Inc.,** Technical Business Analyst  
**Microsoft,** Software Engineer  
**Microsoft,** Software Engineer \*  
**Microsoft** \*  
**Microsoft**  
**Nutanix,** Backend Software Engineer \*

**Oracle** \* (2)  
**PayPal**, Senior Software Engineer +  
**Peloton**  
**Pinterest**, Product Analyst  
**University of Pennsylvania**  
**VMware, Inc.**  
**Waymo** \*  
**Zocdoc**, Full-Stack Software Engineer

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 + *Continuing Previous Employment*

## COMPUTER GRAPHICS & GAME TECHNOLOGY

### Full-Time Employment

**Alibaba Group**, Frontend Software Engineer +  
**Apple** (2)  
**Capital One**, Software Engineer ○  
**DreamWorks Animation**, Software Engineer  
**Google, Inc.**, Software Engineer (2)  
**Intel Corporation**, Computer Graphics Software Engineer  
**NVIDIA Corporation**, Research & Development Engineer  
**NVIDIA Corporation**, Software Engineer  
**Rockstar New England**  
**Sony Interactive Entertainment America (Sony PlayStation)**, Gameplay Programming  
**Tencent Games**  
**Wombat Studio, Inc.**  
**Zenimax Online Studios**, Associate Gameplay Programmer

## DATA SCIENCE

### Full-Time Employment

**Airbnb**, Software Development Engineer +  
**Amazon** (2)  
**Bridgewater Associates**, Investment Engineer ○  
**Facebook**, Data Scientist ○  
**Facebook**, Data Scientist  
**Google, Inc.**, Software Engineer  
**Google, Inc.**, Software Engineer ○  
**Google, Inc.**, Software Engineer +  
**Mapbox**, Geospatial Software Engineer  
**Microsoft**, Data Engineer  
**Oracle**, Software Engineer  
**PayPal**  
**Vistar Media**, Full Stack Developer

**VMware, Inc.**  
**Wayfair**

## ELECTRICAL ENGINEERING

### Full-Time Employment

**Amazon**, Software Development Engineer (2)  
**Amazon**, Software Engineer  
**Artech**  
**Axon**  
**China Mobile**, Computer Programmer  
**Dropbox**, Software Engineer +  
**Eaton**, Electrical Design Engineer  
**Facebook**  
**Google, Inc.** \*  
**Huawei Technologies, Inc.** (4)  
**Hughes**, MTS-2  
**Hughes**, MTS-2 Hardware  
**Hughes**  
**Lockheed Martin**, Frontend Software Engineer +  
**MathWorks**, Engineer in Engineering Development Group  
**Micron Technology Inc.**, Circuit Design Engineer  
**Micron Technology Inc.**, Firmware Engineer  
**Micron Technology Inc.**, Product Development Engineer  
**Microsoft**, Program Manager o  
**Microsoft**, Software Engineer  
**Northwestern University**, Research Technologist 2  
**Optimus Ride**  
**Oracle** \*  
**pSemi**, Analog/Mixed Signal IC Designer  
**Qualcomm**, RF/A Verification  
**Qualcomm**, System Software  
**Quanergy Systems**, Firmware Engineer  
**Saucon Technologies**, Electrical Design Engineer  
**Vanguard**, Machine Learning Engineer  
**Xilinx**, Hardware Design Engineer

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## EMBEDDED SYSTEMS

### Full-Time Employment

**Alarm.com Inc.**

**Celona**, Software Engineer

**Facebook**, Product Manager

**Facebook**, Technical Program Manager

**Hewlett Packard Enterprise**, Wireless Software Engineer

**LinkedIn Corporation**, Software Engineer

**Microsoft**

\* *Dual Degree Recipient*

o *SEAS Bachelor's & Master's Degree*

+ *Continuing Previous Employment*

## INTEGRATED PRODUCT DESIGN

### Full-Time Employment

**10XBeta**, Product Design Engineer

**Capital One**, Design Associate

**Jump Associates LLC**, Innovation Strategist

## INTEGRATED PRODUCT DESIGN (MSE)

### Full-Time Employment

**Allevi, Inc.**, Mechanical Design Engineer

**Apple**, Product Design Engineer

**Halma PLC**

## MATERIALS SCIENCE & ENGINEERING

### Full-Time Employment

**BMW**, Global Leader Development Program Trainee

**Facebook**, Software Engineer \*

**Foxcon**

**Huatai Financial USA Inc.**, Consulting Business Associate

**Huawei Technologies, Inc.**, Engineer

**Microsoft**, Software Engineer \*

**PwC**

**The Boeing Company**, Systems, Materials and Process Engineer

**The Estee Lauder Companies, Inc.**, Associate Engineer o

**University of Pennsylvania**, Graduate Research Assistant +

**W. L. Gore & Associates, Inc.**, Reliability Engineer

## MECHANICAL ENGINEERING & APPLIED MECHANICS

### Full-Time Employment

**ASML**, Mechanical Analyst  
**ASML**, Mechatronic System Design Engineer  
**Discovery Robotics**, Software Engineer  
**Foxconn**, Product Design Engineer  
**Hesai Photonics Technology Co. Ltd**, Junior Engineer +  
**Horizon Robotics**  
**Huawei Technologies, Inc.**, Engineer  
**Lockheed Martin**, Mechanical Engineer +  
**Microsoft** \*  
**Nokia Bell Labs**, Software Developer  
**PowerFlex Systems**, Project Associate Intern ○  
**Raytheon Company**, Mechanical Engineer II  
**University of Pennsylvania**, Research Specialist  
**University of Pennsylvania** \*

\* *Dual Degree Recipient*  
○ *SEAS Bachelor's & Master's Degree*  
+ *Continuing Previous Employment*

## NANOTECHNOLOGY

### Full-Time Employment

**Bank of China**  
**GMC**  
**Micron Technology Inc.**, Process Engineer +

## ROBOTICS

### Full-Time Employment

**Aerial Applications**  
**Amazon**, Software Engineer  
**Amazon**, Software Engineer ○  
**Amazon** \*  
**Amazon Robotics**, Software Engineer  
**Apple**, Software Engineer  
**Aurora Flight Sciences**, Machine Perception Engineer  
**Aurora Flight Sciences**  
**Aurora Innovation**, Software Engineer  
**Berkshire Grey, Inc.**, Robotics Software Engineer ○  
**Berkshire Grey, Inc.**  
**Bloomberg**, Full-Stack Software Engineer  
**Boston Dynamics**, Robotics Engineer  
**Brain Corporation**, Software Scientist +

- Bresslergroup**, Mechanical Engineer
- Dropbox**, Software Engineer \*
- Exyn Technologies**, Robotics Software Engineer
- Formlabs**, Quality Engineer ○
- General Dynamics Mission Systems**, Engineer
- Goldman Sachs**, Analyst
- Google, Inc.**, Software Engineer \*
- Horizon Robotics**
- HypeVR**, Computer Vision Engineer
- Millennium Space Systems**, Assembly, Test, and Launch Operations Engineer ○
- MIT Lincoln Laboratory**, Associate Staff
- Momenta** \*
- NVIDIA Corporation**, Software Engineer ○
- Oracle**, Software Developer
- Pony.ai**, Software Engineer
- pronto.ai**, Mechanical Engineer
- SpaceX**, Test Automation Engineer ○
- University of Pennsylvania** \*
- Warburg Pincus**, Analyst
- Waymo** \*

\* Dual Degree Recipient  
 ○ SEAS Bachelor's & Master's Degree  
 + Continuing Previous Employment

## SCIENTIFIC COMPUTING

### Full-Time Employment

- Lucid Motors**, Senior Engineer

## SYSTEMS ENGINEERING

### Full-Time Employment

- Amazon**, Software Development Engineer
- Amazon**, Software Development Engineer \*
- Appfolio** \*
- Baidu USA LLC**, Machine Learning Engineer
- Citibank**
- Dell**
- Ericsson**
- EY**
- Foray Design**, Marketing and Operations Manager +
- Garmin International**, Aviation Systems Engineer
- Google, Inc.**, Software Engineer \*
- Hongji Metal USA**
- Microsoft**, Software Development Engineer

**Nutanix**, Backend Software Engineer \*

**One Financial Network**, Intern

**Oppenheimer & Co. Inc.**, Trader +

**Oracle** \*

**Pacific Planning Group, Inc.**, Supply Chain Manager

**PwC**

**ThayerMahan**, Machine Learning Engineer

**Unionpay**, Analyst

**XDF**

**Xenon Health**, Operation Associate

\* *Dual Degree Recipient*

o *SEAS Bachelor's & Master's Degree*

+ *Continuing Previous Employment*