JOB TYPES OVERVIEW

Job Types

- Infrastructure
- Backend
- Frontend
- Native
- Science and Theory
- Marketing
- Hardware and Graphics

Job Types

- Definitely overlap between skills required
- Some titles overlap categories

Infrastructure

- Sysadmin (managing, setting up, and keeping systems running)
- Dev-ops (creating & using tools that devs use to manage systems)
- Network Engineer (setting up, designing, and optimizing network infrastructures, TCP/IP, and other layers of the network stack)
- Data Center Ops (they keep "the cloud" running)
- Cable & Router Technicians
- Database Administrators
- Technical Support & Documentation

Backend

- Full stack engineers (a little bit of everything)
- Backend Application Development (rails, django, node, etc.)
- Project Management (not always a technical role)
- Engineering Management (usually former developers)
- Software Architects (planning out features before they are coded)
- API Design (designing the interfaces between systems)
- Security & Pentesting
- Distributed System Architects (dealing with consistency, availability, partition tolerance, timing, of large, globally-separated systems)
- Database Administrators (managing, maintaining, sharding, and migrating data stores, different from infrastructure-focused DBAs in that they are also writing backend code which interacts with the stores)

Frontend

- Full Stack (a little bit of everything, but focused primarily on the pieces that support a frontend)
- UX/UI Front end designers (photoshop, indesign, sketch, html & css, etc. only)
- General front end web development (html, css, **and** js)
- Single-page app development (mostly with JS frameworks, e.g. angular or react)
- Quality Assurance & Testing (writing tests, doing human tests, making sure things work)

Native

- iOS, Android, Windows Mobile, etc.
- Consumer-facing Windows Desktop, OS X Desktop, Linux app development
- Enterprise software development (large, made-to-order applications for businesses)
- IT administration & admin software design (often very system-specific, hence the Native category)
- Software Architecture (similar to backend architecture, designing features before they are coded)

Science and Theory

- Scientific Research (Matlab, R, and ipython and more)
- "Pure Compsci/Pure Math" Research (with haskell, lisp, lots more)
- Scientific Software Development (e.g. protein folding software)
- Data science (matlab, r, ipython, scikit-learn, etc.)
- Machine Learning
- OS Design (not just microsoft, windows, & linux, also qualcomm and lots of other telecoms hire tens of thousands of engineers to write embedded and mobile OSs)

Marketing

- Growth hacking/web scraping (selenium, beatifulsoup, phantomjs, scikit-learn, pattern, etc.)
- Analytics (GA, mixpanel, optimizely etc. closely tied with marketing and SEO)
- SEO & SEM (techniques for search engines)
- General Marketing Development (salesforce, analytics, content-design, and SEO)

Hardware and Graphics

- Embedded Software (code that runs very close to the metal, e.g. the assembly code running your elevator)
- Chip Design & Architecture
- Game development
- Graphics software development
- 3D printing and machining coding
- CGI & Animation

Conclusion

- Most engineers and programmers have skills in multiple categories
- Think about what interests you!