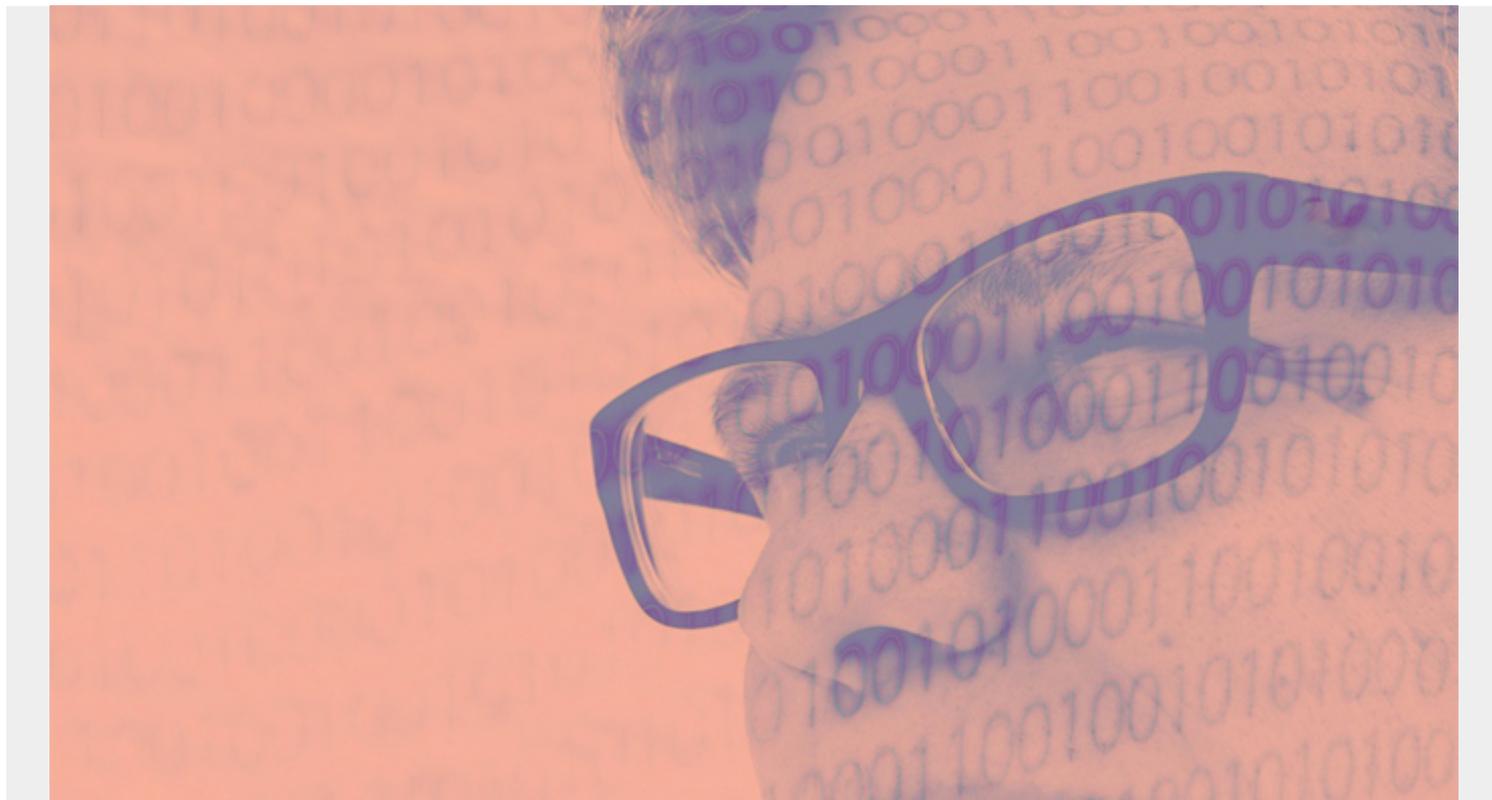


APPLICATION ENGINEER ROLES AND RESPONSIBILITIES



If you're familiar with the industry, then you've probably heard of Application Engineers. Maybe you've even hired one yourself to complete a project. But what are the exact roles and responsibilities of an Application Engineer?

Summary

Application Engineers set out to improve the overall functioning of their client's software. They do so by creating new software architecture, working within existing software and engineering hardware components that optimize certain technology. They are hired by application development firms with a number of clients toward the goal of meeting unique software needs.

These engineers are similar to Business Analysts because of their skillful extraction of information from clients to determine the project scope and design a solution. However, unlike Business Analysts, they typically work with external clients and not on internal projects.

In addition to developing applications and improving the functioning of existing software, an Application Engineer must also possess hardware knowledge and understand technical specifications of a broad range of software to address client concerns. They are the key customer-facing team member and are also expected to have the soft skills that come along with sales and customer service.

Team

Application Engineers are part of a technical team called the Application Development and Maintenance Team (ADM).

Typically, this group is led by a Project Manager who oversees multiple teams that each have their own dedicated engineers. ADM works closely with client-side Project Leaders, Product Owners and internal Senior Management to ensure application jobs are completed with accuracy.

The ADM team may also include several designers and developers in addition to the Application Engineer. As the title engineer implies, the Applications Engineer is a team lead. They are also the main point of contact for the client, representing the entire team and accountable for overall satisfaction. Essentially, they function as a bridge between ADM and the client.

The reach of the Applications Engineer spans across several departments including sales and marketing, engineering, customer service and manufacturing.

Roles and responsibilities

The Application Engineer has several responsibilities that are critical to the smooth functioning of the ADM team.

Develop applications and improve existing software

The primary role of an Application Engineer is to design and improve software. They perform need evaluations with clients to understand the unique goals of each project and then implement after careful assessment.

This sometimes means they are tasked with the development of custom software. But Application Engineers should keep thinking one-step ahead as they are also in charge of planning and implementing expansion projects for the client's current software infrastructure.

For example, an Applications Engineer might be tasked with building a whole new database platform for a client. Or they may recommend only a database upgrade that allows sales representatives to see more customer contact information from the database in another application they frequent, like Microsoft Outlook. It is up to the Applications Engineer to understand what the client is trying to accomplish and make the best recommendation for how to get there.

This means, first and foremost, Application Engineers must be comfortable with many coding languages, and particularly those that apply to enterprise solutions.

Provide tech support to clients

An Application Engineer also serves as a help desk point of contact for their clients, answering 2nd, 3rd and 4th tier tech support calls. If working with a help desk team, the Applications Engineer may define priorities and assist with the higher-level calls, ensuring quality troubleshooting services are delivered to clients in a timely manner.

In some cases, Application Engineers will respond to client needs onsite and provide additional consultation. These kinds of tech support calls can lead to up-selling opportunities for assertive Application Engineers who are tasked with incremental sales growth.

Whether by phone or in person, an Application Engineer is always expected to deliver the highest level of customer service when responding to calls. They use their knowledge of both hardware and software, along with critical thinking skills, to provide solutions for clients from running software updates to recommending and installing new hardware components that make their infrastructure run more smoothly.

Provide hardware upgrades as needed

Application Engineers are expected to not only understand the needs of the client but also the technical needs of their software. This means they must have a deep understanding of hardware technical specifications as they relate to client software needs.

Things like server speed and availability, processor speed and other mechanical components have an impact on software performance. That's why experts recommend going into this field with a general computer science degree or one in electrical engineering. In some cases, Application Engineers design and develop custom mechanical components as they relate to software applications.

For instance, some Application Engineer jobs require knowledge of solid state drives for those who are working with mobile devices. Others ask for applicants with knowledge of radio technology, or a certain type of enterprise server.

While the specific knowledge requirements of an Application Engineer will vary from position to position, it's certain that some hardware knowledge will come into play.

Understand client-base and make sales recommendations

One role of an Application Engineer involves regularly reassessing the needs of their clients. That means looking at their current software and hardware inventory and determining where improvements can be made.

Application Engineers should be skilled at the art of up-selling. They will have many opportunities to do so during the initial consultation and follow-up tech support calls. During this process, they should be able to translate tech jargon into meaningful, relatable terms that make sense for their clients.

Documentation and inventory of all systems

Finally, Application Engineers must be detail-oriented since they are responsible for the documentation of service calls and inventory of all systems for their clients. This means keeping detailed records of installations and hardware components in addition to logging all technical specifications required to keep systems at peak performance.

In many cases, inventory software and other office software suites will be used to complete the task of inventory and documentation. The Application Engineer should be familiar with all office software necessary to complete the job.

Career path

Most companies require Application Engineers to complete a 4-year degree in computer science or

a related field. More importantly, they must also have a great deal of knowledge and experience with programming languages, development and design of enterprise programs and hardware knowledge. Most companies are looking for 5+ years of experience in these and related modalities.

Some of the skills employers seek when looking for the right person to maintain their software include:

- Developing and improving software applications
- Familiarity with hardware
- Minor electrical engineering
- Superior troubleshooting skills
- An aggressive sales demeanor
- Soft skills

Entry level IT professionals who are looking to develop their career paths in the field of Application Engineering can seek credentialing through IEEE computer society. This group offers a Certified Software Development Associate (CSDA) certification to put new IT professionals on the right track.

After gaining work experience in the field of software development, another credential is available through IEEE. This is Certified Software Development Professional (CSDP).

Jobs in this field are desirable. In addition to competitive pay, careers in Application Engineering offer a high-level of job satisfaction. That's in part because companies hiring for Application Engineer are often highly-sought-after companies like software producers and computer design firms who need someone to service their external clients. Application Engineers work with clients across a wide variety of industries so the role requires someone with a broadly developed skill set.

Outlook

Businesses rely on their software's performance to stay operational. When software isn't working at optimal levels, businesses waste time and money trying to solve the problem. One example that many businesses tackle is applying the same customizations to [SaaS platforms](#) as they do for their in-house applications.

With issues like these emerging every day in a dynamic technology climate, Application Engineers have become critical players in providing enterprise support to businesses. The importance of Application Engineers is evidenced by a projected 22% growth rate in the profession expected by 2024. That's above average for the already rapidly-growing IT field. In addition, the median salary is close to \$70,000, with many engineers earning close to \$100,000 for their expertise.