Stephen Dumore

Ms. Silva

English 11H

1 October 2018

Career of Choice: Database Administrator

Introduction

    I've had an interest in all things related to computation from a young age. When I was a kid I was infatuated with video games. I always wondered and thought about how different elements of the games I played were organized and how they worked in conjunction with each other. What initially sparked my interest for database administration in particular was when I discovered that DBAs can specialize in organization and can work for a wide array of companies while researching careers. I think I would be a strong asset to any organization's database administration team because I have have high problem solving and critical thinking skills. I also enjoy working with complex systems.

Career Duties

    A database administrator, as the name implies monitors databases. According to career builder a typical day for a database administrator can include: " Monitoring databases and ensuring they meet or exceed performance baselines, detecting security breaches and protecting data integrity if these occur, and developing initiatives to improve business databases"(Career Builder). These databases are typically used to store a company's financial information or other data. Their job is to keep said data secure and organized. Since personal financial data is stored on databases, maintaining security is crucial aspect of this profession. They also help determine

when it's necessary to create a database. Another of their duties is backing up and restoring data to safeguard against data loss (BLS). Also they modify databases and test said modifications. Analysts often use their organization's databases in their work. In order to make this possible database administrators must keep them organized and easy to navigate. Many DBAs are general purpose and fulfil most or all of the aforementioned duties. However, some DBAs such as System and Application DBAs can specialize in a more specific area. System DBAs ensure that the system functions properly. They have backgrounds in system architecture which they utilize to install upgrades and or patches to fix bugs. Contrastley, Application DBAs have deep backgrounds in programming. They maintain databases which have been developed to perform specific tasks. They use complex programming languages to develop or debug programs which serve to manage applications that work in conjunction with the databases.

Work Environment

According to The Prospects article "Database administrator," The work environment is generally informal. The work hours range from 37 to 40 hours a week, Monday through Friday. There are periods of low usage in which an employee may have to work at night or during weekends due to maintenance or development. They also can be on call in critical situations. The rigor of the occupation can vary depending on the organization that they're working for and how taxing their current situation is on their databases (Prospects).

Important Qualities

A bachelor's degree in an information or computer related field such as computer science is usually required. People in this occupation need be familiar with database languages such as Structure Query Language (SQL). According to the article "What is SQL, and what are some

example statements for retrieving data from a table?" SQL is, "...an ANSI and ISO standard, and is the de facto standard database query language. A variety of established database products support SQL, including products from Oracle and Microsoft SQL Server. It is widely used in both industry and academia, often for enormous, complex databases."There are numerous database languages so familiarity with whichever one a database administrator's particular firm uses is required. Some other database languages include: Data Manipulation Language(DML) and Data Control Language(DCL) (Singh). It is important for databases administrators to have good analytical skills, flexibility, organization skills, and a collaboration skills (Prospects).

Education/Experience Requirements

The bureau of labor statistics states, most DBAs hold a bachelor's in a computer or information related field, an example being computer science. Many employers require their DBAs to be certified in whatever particular software they use. This can be obtained either directly from a software vendor or from a vendor neutral certification provider (BLS). According to the Prospects job profile, Database administrator, some form of prior work experience with IT is usually necessary (Prospects).

Salaries

According to Indeed, the median annual salary for a DBA in California is $90,125 with the minimum being $26,000 and the maximum being $192,000. Nationally salaries remain relatively similar, the median is $85,03 with the minimum and maximum being $26,000 and $177,000 respectively. There are various factors that impact a DBA's salary. One of which is location. According to Careerbuilder states where there is a greater concentration of DBAs such as Texas, California and New York tend to pay higher. Contrastly, states where there are fewer

DBAs such as Montana and Idaho generally offer lower pay. Another factor which impacts a DBAs salary is the their amount of work experience. The glassdoor figure below displays current salaries for DBAs in the US Currently.
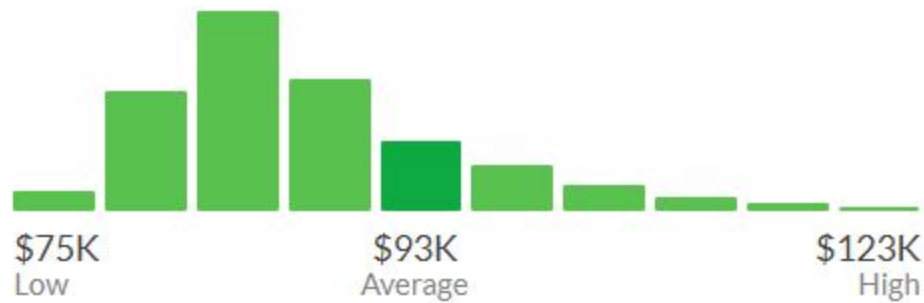

Fig. 1.

According to CareerBuilder "Experience influences salary, with database administrators with five or more years in the field commanding greater salaries than entry-level administrators" (CareerBuilder).

Job Outlook

According to the National Bureau of Labor Statistics the availability of careers in database administration is increasing. They have predicted that employment in this field will increase by 11% between the years 2016 and 2026, which is above average. In addition, Database-as-a-service, which uses the internet to enable third parties to monitor databases remotely is becoming more prevalent. If this increase continues it's possible for the employment rates to see a 17% increase between 2016 and 2026. Not to mention employment for DBAs in computer systems design and other related services specifically has been projected to increase by 20% within the same time frame. The growing popularity of cloud services could for databases' increase, and therefore career opportunities for database administrators in prevalence among

small and medium businesses (BLS). The aforementioned numbers are represented on the figure
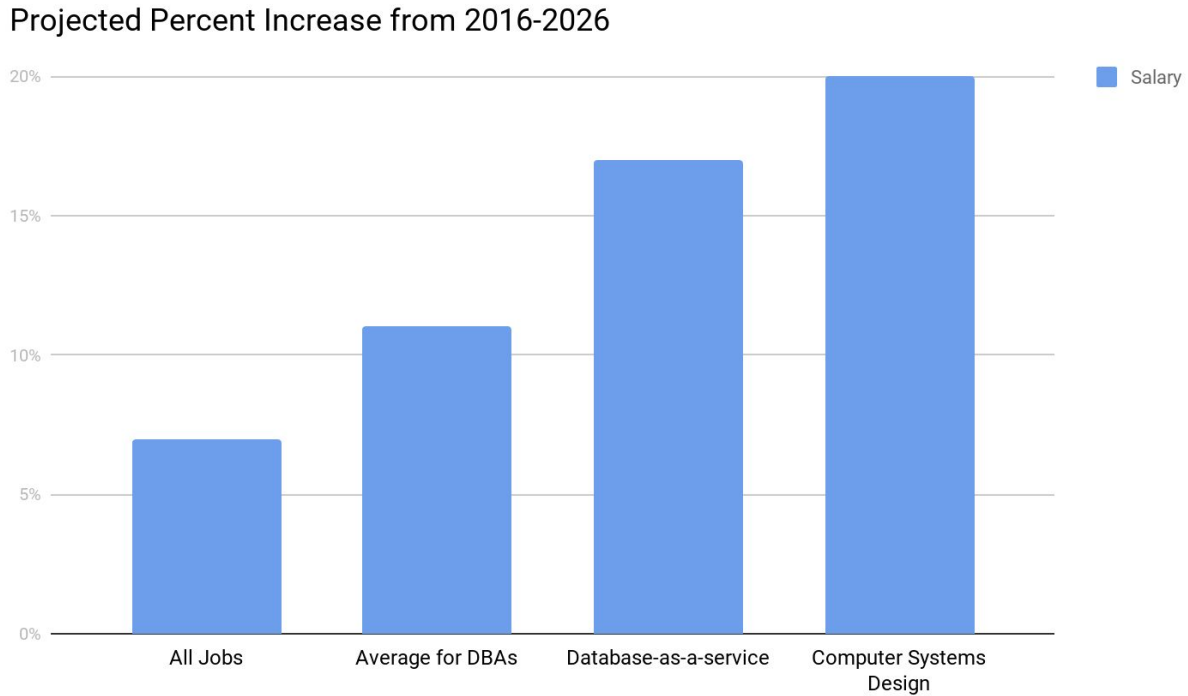
below.

Projected Percent Increase from 2016-2026

Fig. 2.

Educational Institution Options

According to the Bureau of Labor Statistics, the majority of DBAs have a bachelor's

degree in either a computer or information related field such as computer science. I plan to

pursue a degree in computer science since there are several other fields that interest me in which

a computer science degree would be applicable. One university that I've considered attending to

get this degree is California Polytechnic University since it offers a bachelor's degree in

computer science and also has a great computer science program (College Board) . However, Cal

Poly is a highly competitive and expensive school so for me, attending school there is somewhat

of a dream. Another College that I've considered Is California State University Fullerton. This school is cheaper and easier to get into than Cal poly making it a more realistic goal. Like Cal Poly, Cal State Fullerton offers computer science as a major and is a four year school. I selected two colleges in California since I don't want to have to travel far from home for college. Also, attending an out of state college tends to be far more expensive (Cal State Fullerton).

Conclusion

It's very likely that I will pursue this career in the future. It can be obtained with a four year degree in computer science which I have multiple plans for acquiring. I believe my abilities and passion regarding computers would make me a valuable asset to an organization's database administrator team. I also believe that becoming a database administrator is something that my childhood self would admire.

Works cited

"About Cal State Fullerton." *Cal State Fullerton*, California State University, 16 Mar. 2018,

      www.fullerton.edu/about/.

"California Polytechnic State University: San Luis Obispo." *BigFuture*, CollegeBoard, 2018,

      bigfuture.collegeboard.org/college-university-search/california-polytechnic-state-universi

      ty-san-luis-obispo?searchtype=college&q=California Polytechnic State University: San

      Luis Obispo (CA).

"Database Administrators: Occupational Outlook Handbook ." *U.S. Bureau of Labor Statistics*,

      U.S. Bureau of Labor Statistics, 18 May 2018,

      www.bls.gov/ooh/computer-and-information-technology/database-administrators.htm.

"Database Administrator Salaries." *Glassdoor*, Glassdoor, 13 Oct. 2018,

      www.glassdoor.com/Salaries/database-administrator-salary-SRCH_KO0,22.htm.

"Database Administrator Salaries in the United States." *Indeed*, Indeed, 11 Oct. 2018,

      www.indeed.com/salaries/Database-Administrator-Salaries?from=serpsalaryblock.

Fig. 1. "Salary for Database Administrator." *CareerBuilder*, CareerBuilder, 2018,

      www.careerbuilder.com/insights/database-administrator.

Fig. 2 "Database Administrators: Occupational Outlook Handbook ." *U.S. Bureau of Labor*

      Statistics, U.S. Bureau of Labor Statistics, 18 May 2018,

      www.bls.gov/ooh/computer-and-information-technology/database-administrators.htm.

"Job Profile Database Administrator." Prospects, HECSU, 6 Sept. 2018,

      www.prospects.ac.uk/job-profiles/database-administrator.

"Salary for Database Administrator." *CareerBuilder*, CareerBuilder, 2018,

      www.careerbuilder.com/insights/database-administrator.

"What Is SQL, and What Are Some Example Statements for Retrieving Data from a Table?"

      What Is SQL, and What Are Some Example Statements for Retrieving Data from a

      Table?, Indiana University, 23 Jan. 2018, kb.iu.edu/d/ahux.