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IST 645 Assignment Managing Information Systems Projects
Assignment 2R – Personal Project Reflections

-Rutwik Ghag

RUTWIK GHAG

(315)9498131 ⋄ rughag@syr.edu ⋄ http://www.linkedin.com/in/rutwikghag

EDUCATION

Syracuse University (School of Information Studies) *2023*
M.Sc. in Information Systems *3.62/4.00(Currently Pursuing)*

Relevant Coursework: Cloud Management, Cloud Architecture, Enterprise Services and Virtualized Systems, Managing Information System Projects, Enterprise Risk Management, Data Admin Concepts and Database Management, Introduction to Data Science,

WORK EXPERIENCE

Student Computer Consultant (Part-time employee) Oct 2021 - Feb 2022
SE Technical Services *Syracuse University*

- Dealt with issues for 25 Syracuse University employees and faculty by handling hardware and software issues
- Installed and deployed 18 new computers and accessory hardware onto the university network; administered access to mailboxes, software, and networks on request

Intern under the Senior Vice President - IT Department June 2019
SBI Funds Management Pvt. Ltd. *Mumbai, Maharashtra, India*

- Created and implemented 2 mini projects using the .NET framework and C#, restructuring the workspace to enhance work productivity and boost network security

PROJECTS

Cloud Services Consulting 2021
IST 615 Cloud Management Project

- Provided consultation and a full report to stakeholders of a video streaming company migrating to a cloud service for 3 types of customer brackets with up to 25TB of data
- Analyzed financial estimates for various vendors, saving 20% of the budget in upfront and overhead costs and presented an estimated Total Cost of Ownership per year as nearly 1.6M$
- Recommended long term backup methodologies, a vendor, and advanced cloud features to enhance user experience and lower latency by 1000 times

Hotel Reservation Cancellations Analysis 2021
IST 687 Introduction to Data Science Project

- Directed a team of 4 to attain actionable insights for reducing number of reservation cancellations by nearly 20% performing data analysis for hotel management in R Studio

Cluster Head Selection Algorithm for Wireless Sensor Networks using Machine Learning 2020-21
Undergrad Capstone Project

- Aligned a team of 3 to develop an algorithm for selection of cluster head to maximize energy conservation in wireless sensor networks using machine learning
- Achieved 27% more conservation than existing traditional algorithms
- Assessed 15+ existing algorithms for energy conservation and explored various fields of application
- Published a research paper in an IEEE conference by demonstrating a complete simulation
- https://ieeexplore.ieee.org/document/9752264

POSITIONS OF LEADERSHIP

Student Mentor 2020-21
ACM MPSTME

- Consulted the core committee and imparted valuable insights for organizing 9 events; solicited participation from 220+ undergraduate students
- Mentored 2 groups of 4 students to design functional websites for technical projects

Treasurer 2019-20
ACM MPSTME

- Regulated finances, facilitated transactions with vendors, and acquired sponsorship deals worth more than 250% of the initial budget
- Guided the Marketing team in making cold calls and getting solid leads

Outreach Manager 2018-19
ACM MPSTME

- Acted as a primary point of contact for 8 vendors, 6 other ACM chapters and 2 committees
- Coordinated with 4 other ACM student chapters for inter-college events and coached the PR department

VOLUNTEERING WORK

Fundraising Volunteer 2020
United Way *Mumbai*

- Raised funds through the Mumbai Marathon and donations for economically empowering women in rural areas
- Sensitized 50+ people on lack of basic needs of women due to poverty

A. Measuring and Monitoring Progress

I will use my undergrad capstone project for this question. I had aligned a team of 3 and we published a research paper wherein we developed our own new algorithm for Cluster Head Selection for Wireless Sensor Networks using Machine Learning. The goal was to create a new algorithm and test it in controlled environments. We also referred to pre-existing algorithms to get an idea of the performance metrics and determine how much better our algorithm was after testing. The way we were measuring progress was based on milestone events. The first milestone was reading enough research papers to understand algorithms. The second was the biggest task of all, creating our algorithm. The third was testing it in controlled environments to make sure it worked by running a complete simulation of the real-world field application. The fourth was comparing results to pre-existing algorithms to quantify the increase in performance based on energy consumption. As leader of the team, I decided that the project would be completed in phases, which now, after having gained knowledge from IST 645 I have identified to be milestone-based progress measurement. Looking back on it now, this is a very rudimentary way of monitoring progress as there were no details to focus on measurement. I learnt that it was not the best method of measuring progress, and it would have been better if I could have divided the

phases down further into individual tasks so that progress could be measured more accurately. That would have also resulted in more morale boosts from seeing continual progress and my team would have performed better.

B. Project Quality Management

Once again, I will be using my undergrad capstone project for this question. To ensure the highest quality of deliverables, I did a few things. Firstly, I followed the IEEE standard for writing research papers. Secondly, I consulted a professor at my university who had worked in the field of Wireless Sensor Networks for her PhD dissertation. She guided me on the nitty-gritties of the topic, where to focus on in terms of research and simulation. Thirdly, I presented the paper to professors from other universities who gave feedback that we should patent the paper. Fourthly, our team ran simulations in MATLAB, the biggest engineering software for simulation in the world. It is also a standard in the world of engineering. The simulation helped in accurately measuring performance metrics against pre-existing algorithms which meant solid results. Finally, we presented the paper in an IEEE conference where several distinguished panelists verify everything and then published out paper in a conference journal. I do believe that I followed the best possible method to ensuring quality of the deliverables. This approach to ensuring quality of work will help me in the future as a project manager.

C. Project Resource Management and Teams

For this question, I would like to reference my internship at SBI Funds Management Pvt. Ltd. I had the wonderful opportunity to work under the senior Vice President of IT during my time there. I was an IT intern, responsible for development. My team had 2 other members, one in charge of communicating with the client and one responsible for assessing risk. He believed in hiring specialists for different tasks, but he made sure that the teams skills complemented each other. For example, even though I was designated to be the developer, my technical skills allowed me to help the guy in charge of risk assessment using my analytical skills. I discovered there that a blend of skills where people complement each other works very efficiently. This knowledge will help me be a good project manager.

D. Project Communications Management and Meetings

I would like to refer my internship again for this question. Although someone else on my team was responsible for communicating with the key stakeholders, I had a close experience with it. The stakeholder meetings would involve the two of us as I had to let them know what was possible and what wasn't. I got to observe first-hand what communication can do. Using the right words, stakeholders can be influenced in a positive way. Negotiation is much easier and setting up dates for milestones becomes very comfortable for the team. I learned the importance of

communication as people are dealt with differently and, a project manager's role as a leader is to nurture the rest of the team to do their best. I have been working on my communication skills ever since and I believe this will help me be a good project manager.

E. Project Ethics

I would like to reference my undergrad capstone project for this question. There was a time when my teammates were willing to use pieces of codes from other algorithms that have been published at non-open-source conferences. I convinced my team members to do otherwise as we were supposed to publish a genuine algorithm developed from scratch. There was a clash of opinion amongst us, but I managed to make them understand the meaning of originality. I learned this important life skill during my internship. My team manager faced a similar situation, and he convinced his team to follow ethics, always. He was a firm believer of following ethical practices in work environments. I respect him a lot and I am glad to have learned the importance of ethical practices.

The PMI Code of Ethics and Professional Conduct applies the idea that the most moral outcome is the best to the practice of project management, and this is what I learned through my experiences.

F. Situational Leadership

I would like to refer to my term as outreach manager at ACM MPSTME during the year 2018-2019. Often my attitude towards my team would be dependent on how much work needs to be done in how much time. Most of the time I would ask them to do stuff with a given deadline and conducting periodic meetings for updates. However, if there were important issues to be taken care of immediately, I would urge them to take care of it as soon as possible, making them understand the importance of urgency as if one person fails to do his task, the rest of the team would be stuck waiting for him to finish. I believe that giving my employees an idea of the larger picture is motivating as it makes them understand their responsibility and where they stand in a chain of employees, making them feel more responsible for the success of the project. This added responsibility is different from my method of making it look easy. I believe this will make me be a better project manager.

G. Lesson Learned

I would like to reference my work experience as a student technical consultant at the iSchool. In December we had received a project for building out 142 computers for faculty and staff. My team consisted of one person from Mexico, another from Jordan, two from America, myself an Indian and our project manager was from Taiwan. The group had a lot of diversity and hence would often result in interesting conversations about our cultures. Thankfully there were no

arguments or disparities as we were all level-headed. When we started working on our project, our manager would often make us change things, like rebuilding the computer because it was now going to be allocated to someone else, since each computer was custom designed according to client preference. This taught me that you should always expect change as people tend to be swayed while deciding.

There was one ethical issue that arose during this project. The issue was that while rebuilding certain computers from scratch we were hesitant as both the computers had software needed on the computer but the level of access, they had in university administration was different. The lazy way out that we figured out was changing the permissions manually. But our manager explained that this was not an optimal decision as this would create a log on the user's device and they could misuse it. Once we were told about this, all of us understood the importance of rebuilding the computer. All of us concluded that it was the right thing to do as we knew how important security is. It did not change my moral views because what I lacked was the awareness about the issue. If given the entire scenario with all the information, I would do what my manager did.

My role as a builder had them complete the task of building the computers which ensured timely delivery of the computers to the users. I also developed a logging system while building the computer which served as an effective tool to keep track of progress.