



PROGRAM & PRODUCT MANAGEMENT CAREER GUIDE

Student Affairs at Carnegie Mellon University Silicon Valley



CONTENTS

INTRODUCTION.....	3
EXAMPLE RESUME.....	4
SKILLS AND COMPETENCIES.....	5
CO-CURRICULAR ACTIVITIES.....	6
INTERVIEW PREPARATION.....	7
NEXT STEPS.....	8



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Acknowledgment section

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Introduction

Program management, simply put, involves managing several related projects, often with the intention of improving an organization's performance. The projects usually have a common goal and can span across various departments. The program manager makes sure every project they are assigned is successful in terms of schedule and cost. The responsibilities and tasks given to a Program Manager and their team varies between companies. For example, at Tesla, program managers have to query the database to get data oriented answers but at Nio, program managers don't need to, although their core values towards the role are the same.

In the book, *Cracking the PM Interview: How to Land a Product Manager Job in Technology*, authors Gayle Laakmann Mcdowell and Jackie Bavaro, state that "a PM is responsible for making sure that a team ships a great product." Product managers need to understand the expectations of the customers, users and stakeholders. Using this data, priorities and features are planned that will be optimal for the company to align with its goals. The product manager collaborates with engineers and program managers of the team to design the roadmap based on the team's velocity and task effort/time estimates. Some companies have a thin line between product and program managers, the program manager will be responsible for developing the product along with program management.

EXAMPLE RESUME

To give you an idea of what a product management resume can look like before it's tailored to the job description, please see the example below. *Please note, these roles may not have occurred in 2019-2020. This is a resume example from a real CMU-SV student, however, other data points are edited each year. Please recognize that this is not a real candidate. Please email career-services@sv.cmu.edu if you have any questions about this example resume or if you need to schedule a resume appointment, please do so through Handshake.

CMU Tartan
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Seeking Technical Product Manager opportunities starting Jan 2020. MS in Software Management at Carnegie Mellon University, Silicon Valley. Possess hands-on experience in gathering user requirements, Full stack development and leading development teams across organizations

EDUCATION

Carnegie Mellon University | Master of Science in Software Management | Mountain View, CA | 3.90/4.00 **Aug 2018 – Dec 2019**
Relevant Courses • Machine Learning • User Centered Research Methods • Metrics for Software Manager • Product definition and strategy • Software Engineering and Management • Elements of Software Management • Software Product Strategy

Jawaharlal Nehru Technological University | Bachelor of Engineering in Electronics and communication | 3.6/4.00 **Aug 2003 – Jul 2007**
 Organizer – Women Engineers, Hyderabad • Speaker – Sanketika • Volunteer – Ignite Talks | Organized “Raise the bar” coding event

SKILLS

Business: Product Planning and Design, Requirement Analysis, Product Strategy, Strong problem -solving abilities, Strong analytical and data visualization skills, Software Project Management, Cross Functional Team Management, Customer Research, Agile Methodologies, Project Management

Technology: Object Oriented Programming, Design Patterns, Java, .Net 4.5, Visual Studio Code, MVC framework, Bootstrap, HTML5, CSS3, JavaScript, jQuery, Machine Learning, React Native, Bootstrap, REST APIs, Web Services, Cloud based Services, SQL, MongoDB, Python for Data Analysis and visualization

PROFESSIONAL EXPERIENCE

Delaro Fungicide– The Climate Corporation (Seattle, Washington) | Technical Program Manager Intern **May 2019 – Aug 2019**

- Led program's phase 2 planning by working across all technical (Product, Science, and Engineering) functions
- Detailed a proposal for Aerial Data Ingest for 'Delaro' 2020 for a projected **95% mark improvement in efficiency**.
- Established Project Governance Process for Climate Corp with a success rate of 90% teams incorporating the process
- Defined project management processes, tooling, and templates to improve operating model maturity of a scaling product.

Advocate Portal (Client – Advocate Health Care Hospitals) | Technical Program Manager | People Tech Group **Aug 2015 – Jan 2016**

- Partnered with Business leaders and stakeholders to gather product requirements and draft requirements document.
- Collaborated with UX designers to translate business requirements to technical requirements as per user experience standards.
- Partnered with dependent teams to build vision and strategy and defined feature prioritization.
- Partnered with engineering and UX design teams to develop, implement to lead team successfully to launch product.
- Facilitated broad collaboration with multiple stakeholders to drive process and communication improvements across dependent teams.

Employee Data Management (Client - Microsoft, Hyderabad) | Senior Web Developer **Aug 2013 – Aug 2015**

- Delivered highly responsive UI screens as a senior front-end developer.
- Collaborated with senior leaders of UX to optimize suggestive search, user navigation and accessibility **to increase usability by 30%**.
- Focused on quality for features and enhanced customer satisfaction by **2x through customer touchpoint and market analysis**.
- Established credibility and rapport with senior leaders of Microsoft to ensure high quality of deliverables for project.
- Researched and learnt accessibility coding and worked with core development team to provide highly accessible and responsive website and increased **acceptance rate by 50%**.

Field Dashboard (Client- Microsoft, Seattle) | Software Engineer **July 2012 – Dec 2013**

- Implemented carousel feature and Semantic zoom list view and enhanced its scope and **effectiveness in project by 2x**.
- Accomplished a custom list view for Semantic zoom against traditional list view to **advance efficiency and resources by 20%**.

Atlas Webservices | Software Engineer | Bank of America, Hyderabad **June 2007 – Apr 2012**

- Implemented core features in Bank of America for products which handle business logic for Pricing for Home Loans.
- Implemented core business logic for home loan rates and calculations for Bank of America.

PROJECTS

Product Manager-CMU Emirates innovations Lab **Jan 2019 – May 2019**

- Analyzing the existing search engine and suggesting improvements to create Knowledge
- Identified business value and defined success metrics to improve the existing business processes and operational efficiency
- Working closely with Emirates stakeholders to design and implement a product roadmap

Program Manager- National Aeronautical & Space Administration (NASA) **Sep 2019 – Dec 2019**

- Prioritizing deliverables and milestones in collaboration with NASA Senior Data scientists
- Tracking project deliverables to detect anomalies in flights by developing predictive models using high dimensional aviation data

SKILLS AND COMPETENCIES

Planning phase

- Communication
- Negotiation
- Prioritization
- Requirement analysis
- Risk analysis
- Stakeholder management
- Scoping
- Scheduling
- Gantt charts
- Prototyping
- Competitive analysis
- Market research

Execution Phase

- Risk analysis
- Tracking of tasks
- Stakeholder management
- Problem solving
- Resource management
- Feedback to team

Monitor and control

- Tracking of metrics
- Stakeholder management

Websites

- Read Glassdoor for each company interview to learn the types of questions to practice
- If you are interested in technical product management, check out these tips: <https://www.mariogerard.com/interview-questions-for-a-technical-program-manager-tpm/>

Books

- Decode and Conquer: Answers to Product Management Interviews By: Lewis C. Lin
- Cracking the PM Interview: How to Land a Product Manager Job in Technology By: Gayle Laakmann McDowell and Jackie Bavaro
- The Product Manager Interview: 164 Actual Questions and Answers By: Lewis C. Lin

Practice Before Your Interview

- Behavioral and situational questions require a lot of practise with the STAR framework. This article is helpful for understanding how to get started with this technique: The SAR Method for Product Management Interview Questions (<https://productschool.com/blog/product-management-2/the-sar-method-for-product-management-interview-questions/>)
- Follow the companies you are applying to on LinkedIn, go to the "About" and "Posts" section of the employer LinkedIn pages and read about all the latest updates before you speak to the hiring manager.
 - This specifically helps when you're asked if you have any specific questions for the interviewer.
 - Making use of this time to talk about the latest product news that the company is working on will display your interest to the employer.
- Learn more about the company's mission and values, their culture, work style, team goals, etc.
- Always be prepared to give suggestions on how they can improve their product



CO-CURRICULAR ACTIVITIES

- Get internship experience if possible as it's always valuable to have relevant experience on your resume
- Having a graduate assistantship or teaching assistant role shows how eager you are to learn more outside your courses and your expertise in a specific area
- Build relationships with your peers and don't be shy to connect/ask questions with guest speakers who share about their industry experience in your courses.
- Don't wait until the last moment to get to know your peers or graduating classmates
- Along with classes, try to do an independent study or practicum to solve a real problem
- Get involved with student organizations and help plan and organize events



INTERVIEW PREPARATION

The first round interview is usually a phone interview with the recruiter to understand your background, experience and interest in the role. The second round is usually a more detailed phone interview round with the hiring manager asking experience-based, behavioral and case study questions. This might vary from company to company. There may be more rounds of phone interviews with additional team members before the onsite. The last round is an onsite interview and they may give you a case study to research and present during the interview and multiple rounds with the VP and senior members of the team. Always come ready with questions for your interviewer in each interview round.

Interview Tips -

- Mock interviews - do plenty of mock interviews. Have sample answers ready for most commonly asked behavioral questions.
- Timing your response - stick to 3 minutes at max for responding to any behavioral question. If you end up finishing your response earlier, end with a question to the interviewer if they would like to know more.



Resources to help you prepare -

- Your own experience in past PM interviews is helpful but if you are completely new to PM interviewing, connect with CMU-SV alumni on CMUniverse (<https://cmuniverse.peoplegrove.com/>) (or students returning from their PM internship) to learn about their interview experiences. Some CMU-SV alumni have posted about their PM interview experience as well. Here is an example of an alum's experience (<https://priyanshimittal.wordpress.com/2020/12/07/getting-a-product-manager-role/>) applying for product manager roles.
- See books and websites under "Skills and Competencies" and additional interview prep sites are: <https://www.tryexponent.com> and <https://stellarpeers.com/> (There's new helpful interview prep websites every year. Ask your go-to Career Consultant for suggestions too.)
- Compare the job responsibilities on the job description and prepare situational based questions

Some sample questions

1. Why do you want to join this company?
2. Why are you interested in being a program/product manager?
3. Give me a situation where you had a strict deadline and limited resources. How did you deal with it?
4. Have you ever had a conflict with someone in your team? How did you handle it?
5. Tell me about a time where you did not know much about a domain area when you joined a team. What were your next steps?
6. Tell me about a time where you failed and what you learned from it.
7. Why do you want to join this team and what interests you?
8. Where do you see yourself in 2 - 5 years?
9. What part of your previous role did you like and not like?
10. What would an ideal job and work environment look like to you?
11. Why do you think collaboration is important?
12. Have you ever set up a team's processes from scratch?

NEXT STEPS

Identify what companies and domain areas you are interested in. Proceed with meeting people from the industry to learn more about their roles and responsibilities at various companies. Correspond your past experience with what is expected from the roles and work on filling those gaps. For example, if you don't have experience being a product manager, ensure you lead a team project in a course as a product manager to get some experience. Also, if the job description asks for experience with roadmaps, create a roadmap for a course project or offer to be a PM for a friend who has a start-up. Be creative in gaining PM skills!



Networking Tips -

- LinkedIn - actively network and form connections. Read articles, posts and content from creators on LinkedIn. Form a view/perspective on the content and articulate with comments. This will help strike a conversation if you would like to connect with the author and want to connect further about the topic.
- AngelList - there are plenty of opportunities posted on AngelList with an option to apply and send a personalized message to the hiring manager. Have a structured message ready expressing your interest in the role and the company. Add these folks on LinkedIn as well!
- Grace Hopper Conference - attend if possible as it's a great place to apply for PM roles
- Product School - offers two annual career fairs that are frequently free to students. Check out their website (<https://productschool.com/>) to mark your calendar for their virtual career fairs.
- If you are interested in being a PM at a start-up, keep an eye out for start-up focused conferences

If you feel lost, reach out to your go-to Career Consultant and Peer Career Consultants at CMU-SV. They are amazing resources and will help you reach out to the right people for guidance.

