

Form I-983 STEM OPT Training Plan Template

Description of Student's Role

The student will learn tools and techniques to design and develop software applications and systems. By the end of the program, the student will be able to analyze software requirements and design software algorithms to improve product performance. The student will be exposed to software analytics processes and data analysis and will learn different metrics that provide insight to software quality. The student will contribute by enhancing the existing analytics processes on data aggregated from software arrays and performing software analysis. The student will eventually utilize software algorithm design techniques and analytics methodologies learned in previous phases to assist Software Engineers in building new software features with complete code coverage.

Goals and Objectives

- 1) Develop skills in software performance tuning.
- 2) Learn the foundational tools to design software algorithms.
- 3) Undergo extensive training in areas such as software requirements analysis, software algorithm structure design and development.
- 4) Develop software algorithms to enhance performance.
- 5) Undergo extensive training in software analysis, including code analysis, requirements analysis, software review, identification of code metrics, system risk analysis, and software reliability analysis.
- 6) Shadow Product Managers to understand feature requirements.
- 7) Learn to develop incremental features on software applications utilizing software languages such as C/C++ Python, Java, and JavaScript.
- 8) Learn to develop highly scalable software code.
- 9) Acquiring widely applicable skills such as software code hand-off and detailed documentation write up.
- 10) Develop ability to perform final automatized software testing at the post check-in stage.

Employer Oversight

The student will begin by shadowing a Senior Software Engineer who will introduce the student to new software technologies. The trajectory of the student's training will result in his/her ability to complete the assigned tasks and provide consultation for technical guidance. The student will also shadow the supervisor and/or Senior Software Engineers in order to learn about analytics principles and data analysis methodologies. The student will observe collaborative meetings between Software Engineers and will conduct analytics autonomously and contribute to the company's overall product development. The student will report to his/her department supervisor, John Smith, who is tasked with communicating job expectations; planning, monitoring, and appraising job results; coaching, counseling and disciplining the student; developing, coordinating, and enforcing systems, policies, procedures, and productivity standards.

Measures and Assessments

The student will participate in regularly scheduled performance evaluations conducted by his/her department supervisor. The student will also be assessed to ensure that specific knowledge, skills and techniques are imparted through the training, including algorithm design techniques, software analysis, and analytical performance modeling.