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|--------------------|--|----------|---|-------------------------|----------|---|--------|------------|----|----|----------|----------|------|----------|----------|----------|----|----|----|----|----------|----|-------------|------------------|------------|------------|------------|------|------|----|
| Activity | Activity Name | 1 | 2 | 3 4 | 1 5 | 6 | 7 8 | 3 9 | 10 | 11 | 12 | 13 | 14 1 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 20 | 6 2 | 7 2 | 8 29 | 9 30 | |
| Milestone 1 | Prepare White Paper on three methodologies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.a | Research Bayesian and MaxEnt methodologies | | | | | | | | | | | | | | | | | | | | | | \boxtimes | \triangleright | $ \nabla$ | | \bigcirc | | | |
| 1.b | Research MrE methodology (Clarkson) | | | | | | | | | | | | | | | | | | | | | | \boxtimes | \triangleright | $ \nabla$ | | \bigcirc | | | |
| 1.c | Complete White Paper | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.d | Clarkson review of White Paper (Clarkson) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.x | Project Management | | | | | | | | | | | | | | | | | | | | | | \times | \triangleright | \odot | \bigcirc | \bigcirc | 1 | | |
| Milestone 2 | Identify initial requirements for RMM and "bench tester" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.a | Identify basic interface requirements of components | | | | | | | | | | | | | | | | | | | | | | \times | \triangleright | \odot | \bigcirc | \bigcirc | 1 | | |
| 2.b | Identify basic interface requirements of components (Sub) | | | | | | | | | | | | | | | | | | | | | | \times | \triangleright | \odot | \bigcirc | \bigcirc | 1 | | |
| 2.c | Identify basic interface requirements of components (Univ) | | | | | | | | | | | | | | | | | | | | | | \times | \triangleright | \odot | \bigcirc | \bigcirc | 1 | | |
| 2.d | Specify high-level requirements for "problem model" | | | | | | | | | | | | | | | | | | | | | | \times | > | \odot | \bigcirc | \bigcirc | 1 | | |
| 2.e | Specify high-level requirements for "problem model" (Sub) | | | | | | | | | | | | | | | | | | | | | | X | X | \bigcirc | \bigcirc | \bigcirc | | | |
| 2.f | Specify high-level requirements for "problem model" (Univ) | | | | | | | | | | | | | | | | | | | | | | X | X | \bigcirc | \bigcirc | \bigcirc | | | |
| 2.g | Specify first-pass minimum API requirements | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.h | Specify first-pass minimum API requirements (Sub) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.x | Project Management | | | | | | | | | | | | | | | | | | | | | | X | \times | \bigcirc | \bigcirc | \bigcirc | | | |
| | | | | Jul | у | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity | Activity Name | 1 | 2 | 3 4 | 1 5 | 6 | 7 8 | 3 9 | 10 | 11 | 12 | 13 | 14 1 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 20 | 6 2 | 7 2 | 8 29 | 9 30 | 31 |
| Milestone 1 | Prepare White Paper on three methodologies | | | | | | | | | | | | | | | | | | | | \times | | | | | | | | | |
| 1.a | Research Bayesian and MaxEnt methodologies | \times | X | $\overline{\mathbf{A}}$ | X | | \sim | ∞ | X | X | X | | | \times | | | | | | | | | | | | | | | | |
| 1.b | Research MrE methodology (Clarkson) | \times | X | $\overline{\mathbf{A}}$ | X | | \sim | ∞ | X | X | X | | | \times | | | | | | | | | | | | | | | | |
| 1.c | Complete White Paper | | | | | | | | | | X | | | X | X | \times | X | X | | | \times | | | | | | | | | |
| 1.d | Clarkson review of White Paper (Clarkson) | | | | | | | | | | | | | | | X | X | X | | | \times | | | | | | | | | |
| 1.x | Project Management | \times | X | | \times | | \sim | ∞ | X | X | X | | | X | X | X | X | X | | | \times | | | | | | | | | |
| Milestone 2 | Identify initial requirements for RMM and "bench tester" | | | | | | | | | | \times | | | | | | | | | | | | | | | | | | | |
| 2.a | Identify basic interface requirements of components | \times | X | abla | X | | \sim | ∞ | X | | | | | | | | | | | | | | | | | | | | | |
| 2.b | Identify basic interface requirements of components (Sub) | \times | X | \langle | X | | \sim | ∞ | X | | | | | | | | | | | | | | | | | | | | | |
| 2.c | Identify basic interface requirements of components (Univ) | \times | X | \langle | X | | \sim | ∞ | X | | | | | | | | | | | | | | | | | | | | | |
| 2.d | Specify high-level requirements for "problem model" | \times | X | \langle | X | | \sim | ∞ | X | | | | | | | | | | | | | | | | | | | | | |
| 2.e | Specify high-level requirements for "problem model" (Sub) | \times | X | \langle | X | | \sim | ∞ | X | | | | | | | | | | | | | | | | | | | | | |
| 2.f | Specify high-level requirements for "problem model" (Univ) | X | X | \overline{A} | X | | X | \bigcirc | X | | | | | | | | | | | | | | | | | | | | | |
| 2.g | Specify first-pass minimum API requirements | | | | | | X | \bigcirc | X | X | X | | | | | | | | | | | | | | | | | | | |
| 2.h | Specify first-pass minimum API requirements (Sub) | | | | | | X | \bigcirc | X | X | X | | | | | | | | | | | | | | | | | | | |
| 2.x | Project Management | X | X | $\overline{\mathbf{A}}$ | X | | × | ∞ | X | X | X | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | T | | | _ | | | | | | | | | | | _ | | | _ | - | | | | |
| MIlestone 3 | Development Sprint 1 | | | | | | | | | | _ | | | l | | | | | | | | | | | \geq | | | | | |
| Mllestone 3 3.a | Development Sprint 1 Identify targets for Sprint 1 | | | | Н | | | | | | \dashv | \dashv | | X | \dashv | + | | | | | | | | | \geq | | | | | 十 |
| | | | + | | Ħ | | | | | | \dashv | | 3 | X | + | | | | | | | | | | | | | | | Ħ |

| 3.d | Perform sprint 1 analysis, coding & testing (Sub) | | | | | | | | | | | | X | X | X | X | X | | | \bigcirc | \bigcirc | \bigcirc | \bigcirc | | | | \Box |
|-------------|--|-----------|---------------|------------|------------------|-----------|---|---------------|--|-------------|---|------------|------------|--------------|----|------|---|--|-----------------------------------|--------------------|------------|------------|------------|---|---------|--|----------------|
| 3.e | Perform sprint 1 analysis, coding & testing (Univ) | | | | П | | | | | | | | X | X | X | X | X | | | lacktriangle | Φ | | \bigcirc | | | | |
| 3.f | Review sprint 1 objectives and deliverables | | | | | | | | | | | | | | | | | | | | | | \times | \Box | | | |
| 3.g | Review sprint 1 objectives and deliverables (Sub) | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| 3.x | Project Management | | | | П | | | | | | | | X | X | X | X | X | | | | \Diamond | X | (X | | | \Box | |
| Milestone 4 | Development Sprint 2 | | | | | | | | | | | | | | Ĭ | Ť | | | | Ť | Ť | Ť | Ĭ | | | | |
| 4.a | Identify targets for Sprint 2 | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| 4.b | Perform sprint 2 analysis, coding & testing (Clarkson) | | | | | | | | | | | | | | | | | | | | | | | | | X | \propto |
| 4.c | Perform sprint 2 analysis, coding & testing | | | | | | | | | | | | | | | | | | | | | | | | | $\times\!$ | \propto |
| 4.d | Review sprint 2 objectives and deliverables | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.x | Project Management | | | | | | | | | | | | | | | | | | | | | | | | | X | \propto |
| | | | | lugu | | | | | | | | | | | | | | | | | | | | | | | |
| | Task Name | 1 | 2 : | 3 4 | 5 | 6 | 7 8 | 3 9 | 10 1 | 1 1 | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 | 19 2 | 20 2 | 21 2 | 2 2 | 3 2 | 4 25 | 26 | 27 | 28 2 | 29 3 | 0 31 |
| Milestone 4 | Development Sprint 2 | | | | | | | \times | | | | | | | | | | | | | | | | Ш | \perp | \perp | |
| 4.a | Identify targets for Sprint 2 | | | | | ┙ | | Т. | | | | | | | | | | | | | | | | Ш | \perp | \perp | |
| 4.b | Perform sprint 2 analysis, coding & testing (Clarkson) | | \leq | | \boxtimes | ≤ 1 | $\times\!\!\!\!/\!$ | \boxtimes | | | | | | | | | | | | | | | | Ш | \perp | | |
| 4.c | Perform sprint 2 analysis, coding & testing | \times | \times | | \times | \times | $\times\!\!\!/\!$ | \bigotimes | | | | _ | | | | | | | | | \bot | | | \sqcup | | \bot | |
| 4.d | Review sprint 2 objectives and deliverables | | | | | | | \times | | | | | | | | | | | | | | | | Ш | | | |
| 4.x | Project Management | \bowtie | \times | | \bowtie | $\sqrt{}$ | $\times\!\!\!\!/\!$ | \mathcal{X} | | | | | | | | | | | | | | | | | | | |
| Milestone 5 | Development Sprint 3 | | | | | | | | | | | | | | | | | | | X | | | | | | | |
| 5.a | Identify targets for Sprint 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.b | Perform sprint 3 analysis, coding & testing (Clarkson) | | | | | | | | | | $\triangle\!$ | | \propto | \boxtimes | | | $\times \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$ | $\times\!$ | ${\sqrt{2}}$ | $\underline{\Phi}$ | 1 | | | Ш | | | |
| 5.c | Perform sprint 3 analysis, coding & testing | | | | | | | | | | \triangle | \bigcirc | \propto | \boxtimes | | | X | $\times\!$ | $\stackrel{\checkmark}{\bigcirc}$ | \bigcirc | 1 | | | Ш | | | |
| 5.d | Review sprint 3 objectives and deliverables | | | | | | | | | | | | | | | | | | | \geq | | | | | | | |
| 5.x | Project Management | | | | П | | | | | | \propto | \bigcirc | \bigcirc | \mathbb{X} | | | X | X | $\langle \rangle$ | \bigcirc | | | | | | | |
| Mllestone 6 | Development Sprint 4 | | | | | | | | | | | | | | | | Ī | T | | Ī | | | | | | | |
| 6.a | Identify targets for Sprint 4 | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| 6.b | Perform sprint 4 analysis, coding & testing (Clarkson) | | | | | | | | | | | | | | | | | | | | | | X | \mathbb{X} | X | X | |
| 6.c | Perform sprint 4 analysis, coding & testing | | | | | | | | | | | | | | | | | | | | | | X | \mathbb{X} | X | X | |
| 6.d | Review sprint 4 objectives and deliverables | | | | ш | | | | | | | | | | | | | | | | | | | | | | |
| 6.x | Project Management | | | | П | | | | | | | | | | | | | | | | | | \times | \mathbb{M} | X | abla | \overline{A} |
| | | | | pten | | | | | | | | | | | | | | | | | | | | | | | |
| Task Number | Task Name | 1 | 2 | 3 4 | 5 | 6 | 7 8 | 3 9 | 10 1 | 1 1 | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 ° | 19 2 | 20 2 | 21 2 | 2 2 | 3 2 | 4 25 | 26 | 27 | 28 2 | 29 3 | 0 |
| Milestone 6 | Development Sprint 4 | | | | | | | | | < | | | | | | | | | | | | | | | | | |
| 6.a | Identify targets for Sprint 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.b | Perform sprint 4 analysis, coding & testing (Clarkson) | | \rightarrow | \otimes | \square | X | | X | $\times\!$ | | | | | | | | | | | | | | | | | | |
| 6.c | Perform sprint 4 analysis, coding & testing | | | \bigcirc | \triangleright | X | | X | X | | | | | | | | | | | | ┵ | 丄 | | $oldsymbol{ol}}}}}}}}}}}}}}}}}$ | | | |
| 6.d | Review sprint 4 objectives and deliverables | | | | | - 1 | | | | < | | | | | | | | | | | | | | 1 / | | | |

| 6.x | Project Management | | | \propto | | | | X | $\times \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$ | | | | | | | | | | | | T | П | \Box | П | | | | |
|--|--|----------|-------------------------------|---|-----|---|---------------------|---|--|------------|----------------|-------------|------------|-------------|----|----|----|------|----|----------|----------------|-------------|----------|----|------|-------|----|----|
| Milestone 7 | Demonstrate RMM tool using "bench" MFA client | | | | | | | | | | | | | | | | | | | | | | \Box | | | | | |
| 7.f (added) | Identify targets for Sprint 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.g (added) | Perform Sprint 5 | | | | | | | | | | $	ilde{	imes}$ | | | X | X | X | X | X | | | | | | | | | | |
| 7.h (added) | Review Sprint 5 objectives and deliverables | | | | | | | | | | | | | | | | | X | | | | | | | | | | |
| 7.i (added) | Identify targets for Sprint 6 | | | | | | | | | | | | | | | | | X | | | X | | | | | | | |
| 7.j (added) | Perform Sprint 6 | | | | | | | | | | | | | | | | | | | | X | X | X | X | X | | X | |
| 7.k (added) | Review Sprint 6 objectives and deliverables | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.a | Develop test set to be run on MFA bench | | | | | | | | $\times\!$ | \bigcirc | | | | X | | | | | | | | | | | | | | |
| 7.b (modified) | Perform authentication session collections | | | | | | | | | | | | | | X | X | X | X | | | X | | | | | | | |
| 7.c | Collect test results and calculate RMM effectiveness | | | | | | | | | | | | | | | | | | | | X | X | X | X | X | | X | |
| 7.d | Prepare final report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.e | Review final report (Clarkson) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.x | Project Management | | | | | | | | $\times\!$ | \bigcirc | | | | X | X | X | X | X | | | X | X | X | X | X | | X | |
| | | | (| Octol | ber | | | | | | | | | | | | | | | | | | | | | | | |
| Task Number | Task Name | 1 | 2 | 3 4 | 5 | 6 | 7 8 | 9 | 10 1° | 1 1 | 2 13 | 3 14 | 1 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 2 | 23 2 | 24 | 25 | 26 | 27 2 | 28 29 | 30 | 31 |
| Milestone 7 | Demonstrate RMM tool using "bench" MFA client | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.j (added) | Perform Sprint 6 | \times | $\stackrel{\bigcirc}{\times}$ | $\propto \!\!\!\! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $ | | | \propto | X | $\times\!$ | | | \times | \propto | \boxtimes | | | | | | | | | | | | | | |
| 7.k (added) | Review Sprint 6 objectives and deliverables | | | | | | | | | | | | | \times | | | | | | | | | | | | | | |
| 7.c | Collect test results and calculate RMM effectiveness | \times | \times | $\langle \rangle \times$ | | | $\langle X \rangle$ | X | $\times\!$ | | | \times | \otimes | \boxtimes | X | X | | | X | X | X | X | \times | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.d | Prepare final report | | | | | | | | | | | | | | | | | | | | | \boxtimes | \times | | | | | |
| 7.e | Prepare final report Review final report (Clarkson) | | | | | | | | | | | | | | | | | | | | X | X | \times | | | | | |
| | | × | \times | | | | | | | | | × | | X | X | X | | | X | | | X | X | | | | | |
| 7.e | Review final report (Clarkson) | × | | oven | | | | | | | | > | \bigcirc | \times | X | X | | | X | \times | | X | X | | | | | |
| 7.e | Review final report (Clarkson) Project Management Task Name | 1 | | oven 3 4 | | | 7 8 | | | | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 | 19 | 20 2 | 21 | 22 2 | X X 23 2 | 24 2 | 25 | 26 | 27 2 | 8 29 | 30 | |
| 7.e 7.x Task Number Milestone 7 | Review final report (Clarkson) Project Management Task Name Demonstrate RMM tool using "bench" MFA client | 1 | | | | | | | | | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 | 19 | 20 2 | 21 | 22 2 | 23 2 | 24 2 | 25 | 26 | 27 2 | 28 29 | 30 | |
| 7.e 7.x Task Number | Review final report (Clarkson) Project Management Task Name Demonstrate RMM tool using "bench" MFA client Prepare final report | 1 | | | | | | | | | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 | 19 | 20 2 | 21 | 22 2 | 23 2 | 24 2 | 25 | 26 | 27 2 | 28 29 | 30 | |
| 7.e 7.x Task Number Milestone 7 | Review final report (Clarkson) Project Management Task Name Demonstrate RMM tool using "bench" MFA client | 1 | | | | | | | | | 2 13 | 3 14 | 4 15 | 16 | 17 | 18 | 19 | 20 2 | 21 | 22 2 | 23 2 | 24 2 | 25 | 26 | 27 2 | 28 29 | 30 | |