18F Principal Consulting Software Engineer Performance Profile

Position summary

18F is looking for talented principal software engineers who can:

- help our partner agencies deliver better digital services to the public
- guide other 18F engineers as they develop skills necessary to build and deploy software in government
- serve as internal consultants to 18F engineering leadership as we continue to improve how engineers learn, share, and iterate on our best practices

As a Principal Consulting Software Engineer at 18F, you will be a builder, coach, and leader. Working with folks across the organization, you will solve large, complex problems while promoting user-centered, open, and transparent culture. The role involves diverse responsibilities — you might be modeling software development best practices for partners one day, mentoring new 18F engineers in government compliance processes another day, and enabling a team to launch a new product that will impact the lives of Americans across the country the next week. 18F is an open-source team, so most of what you work on will be open source.

Principal Consulting Software Engineers on our team should be:

- Problem-solvers of both engineering challenges and human factors problems, with a discerning judgment to differentiate between the two.
- Technical experts who develop high-quality software and share best practices.
- Empathetic coaches, mentors, and advocates who help partner agency staff develop the skills to build and maintain their own digital services/products.
- Collaborative leaders in cross-functional teams.

18F's core languages are Ruby, Python, and JavaScript. You should have strong, demonstrable experience with at least one of these languages and should be proficient in web development, relational databases, navigating bureaucratic processes, and coaching other engineers as they learn things you already know. You should understand and use engineering best practices such as source control, automated testing, continuous integration and deployment, and peer review. From a coaching perspective, you should understand how feedback loops make or break team dynamics, how to adapt your coaching methods to different learning styles, and how to teach new processes in ways that allow for maximum learning to occur (including when allowing failure is important and acceptable).

Key objectives

Objective #1: Develop high-quality software and teach others how do the same

You'll contribute well-tested, maintainable code across an entire project lifecycle, using best practices for modern software development.

Successful principal consulting software engineers:

- Practice and enthusiastically share engineering methodologies and tools throughout all stages of the project lifecycle.
- Ensure project planning and design is based in usability research, analytics, and other metrics.
- Model good practices around code review, architecture discussions, and feature prioritization and teach others how to use best practices in these areas.
- Strive for excellence in all projects you touch; leave code and teams better than you found them.
- Ensure projects contain necessary documentation, tests, style fixes, accessibility, performance, security, and more.
- Deliver code that's easy to deploy, update, and monitor by ensuring that the necessary tooling is present early in the project development cycle or by introducing tooling into an existing project, as needed.
- Help teams successfully navigate bureaucratic processes, including security and compliance processes, Section 508 accessibility reviews, and technical stakeholder management.

Objective #2: Shape team culture and knowledge

You'll positively help shape the culture and knowledge of the engineering team, practicing and enthusiastically mentoring others in best practices for government software delivery throughout all stages of the project lifecycle.

Successful principal consulting software engineers:

- Teach other 18F engineers how to navigate the unique challenges to launching software in government (such as getting an ATO (Authority to Operate), undergoing Section 508 review, working with blended teams of contractors and federal employees, and more).
- Work within a distributed, multidisciplinary agile team by leading constructive discussions, openly sharing knowledge, and demonstrating the value of contributions from both developers and non-developers contributions.
- Support a safe, inclusive workplace and a positive team culture where all team members value diversity and individual differences.
- Provide visibility into each project's progress, communicate blockers and challenges, and ask for help when you need it.
- Demonstrate a strong understanding of the elements of agile methodology (scrum, kanban, and so on).
- Practice and help others practice human-centered design, user testing, feature prioritization, DevOps, and other relevant concepts.

Objective #3: Enable 18F teams to deliver results for the public

You'll produce high-quality results by applying technical knowledge, analyzing problems, and calculating risk. You'll also serve as a resource for other 18F engineers and project teams encountering related challenges.

Successful principal consulting software engineers:

- Hold themselves accountable for measurable, high-quality, timely, and cost-effective results and enable other 18F engineers to do the same.
- Demonstrate credibility in their areas of expertise and proactively mentor other 18F engineers who are learning about those areas.
- Meet the needs of internal and external customers.
- Help other 18F engineers and project teams make well-informed, effective, and timely decisions.
- Identify, analyze, and lead teams to solve problems in a constructive manner.

- Explain technical issues and concepts clearly to both developers and non-developers.

Objective #4: Lead change to meet organizational goals

You'll drive change, both within and outside the organization, to meet organizational goals. You'll help establish an organizational vision and implement it in a continuously changing environment.

Successful principal consulting software engineers:

- Dig into why systems and processes work the way they do, and find ways to work across engineering teams to make them more effective and efficient.
- Develop, implement, and drive technical strategy in engineering-specific and organization-wide contexts, and bring other engineers along throughout the process.
- Keep up-to-date on policies and trends that affect the organization and shape stakeholders' views, and distribute and implement that knowledge across the 18F engineering chapter.
- Enable teams to adapt to change and quickly integrate new information.
- Take a long-term view and build a shared vision with people across TTS, GSA, and across the US Government, particularly cross-agency endeavors to develop federal best practices.