



## NSF-funded Innovative Post-doctoral Research Fellowship (IPERF)

Funded by the **National Science Foundation**, the **Innovative Postdoctoral Research Fellowship (IPERF)** defines a new career pathway for entrepreneurial-minded doctorate degree holders in science and engineering (S&E).

**Details:**

<https://iperf.asee.org/about/>

**Compensation and Program Benefits:**

<https://iperf.asee.org/benefits/>

**Eligibility:**

<https://iperf.asee.org/eligibility/#1552845485099-1c8f870f-2db9>

## Research Opportunity Title

STEM Education Technology Researcher (Product Management)

## Description

Edfinity ([edfinity.com/homework](http://edfinity.com/homework)) is a next generation online homework and testing platform for K-12 and Collegiate STEM subjects with a view to providing equitable access at scale to quality assessments and instructional material.

This Small Business Innovation Research (SBIR) Phase II project is advancing the state-of-the-art in educational technology aimed at teacher collaboration and authoring of online assessments that effect superior STEM learning outcomes. The effort centers around the implementation of an online collaborative authoring tool enabling non-technical users to author sophisticated problems/assessments and distribute them as embeddable widgets on disparate assessment platforms. This would empower educators and enable equitable access to assessments at scale while challenging the rent-seeking hegemony of large commercial publishers. Additionally, it will encompass the creation of individualized adaptive learning pathways to advance the state-of-the-art in online assessment technology.

Training and learning opportunities include (a) Immersive experience in an intellectually challenging and fast-paced product development environment in a dynamic technology company; (b) Vibrant interaction with a team and community of accomplished entrepreneurs, technologists, researchers and educators around the world; (c) Contribute to the evolution of a transformative product with the potential to impact hundreds of millions of K-12 and collegiate learners across the world (d) Develop product management and product marketing skills; (e) Possible travel to engage with diverse, international customer audiences.

Principal Research Areas: Human Computer Interaction, Assessment-driven Learning, Adaptive Learning, Learning Progressions, Educator Communities of Practice, Learning Analytics, Machine Learning

Skills: Software Engineering and Development, Data Sciences, UX design, UI design, Analytics, Social Media.

Proposed Interactions and Mentoring Schedule: The selected candidate will be an integral part of the product management and development teams which have an established reporting structure and communication protocol. In addition to being an integral member of the team, the selected candidate will have weekly meetings with an assigned mentor. The mentor will aid and guide the candidate on execution of assigned responsibilities, and presenting work products to the team. The candidate will also be provided opportunities to present research in various corporate, academic and professional settings.

Location(s): Palo Alto.

## Desired Knowledge

The ideal candidate would have a doctoral degree in one of the following disciplines – Mathematics, Statistics, Computer Science/Computational Thinking, Cognitive Science, Data Sciences,



Engineering, STEM Education, or STEM Learning Research, with a strong grounding in both qualitative and quantitative research. Additionally, we are looking for general fluency in a broad range of digital technologies, moderate to strong skills in one or more of the following - computer programming using Python and/or Rails, development of web or mobile apps, user experience or user interface design, machine learning, statistical data analysis, measurement and interpretation of usage analytics. Keen interest in education and educational technology would be a plus, as would some teaching experience at the K-12 or collegiate levels in any STEM subject, and the ability to work in a collaborative team environment. Experience in programming technology-enhanced assessments (such as WeBWork) would be a plus.