

## Request for Technology Fee Funds

**NOTE: A separate request should be made for each initiative.**

**I. Department Number/Department Name:**

Computational Science & Engineering
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**Title of Request (please be brief):**

Support for Data Analytics for CSE Programs and Courses
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**Amount of Request (formula from detailed budget below):**

\$194,150
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**Executive Summary of Request (100 words or less):**

This proposal addresses the improved support of Data Analytics in courses in the School of Computational Science & Engineering and its programs of study.
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**Specific class and/or lab initiative(s) if applicable:**

Listed in narrative section below / attached sheets
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**Contact person for this request (incl. phone #):**

David Bader bader@cc, Jason Riedy jason.riedy@cc
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**Indicate priority per department if applicable:**

Number      of     

**Indicate priority per college or unit:**

Number   1   of   6  

**II. Impact on Students - Provide an estimate of how many students will be impacted if your request:**

	No. of Students
Graduate	351
Undergraduate	44
<b>Total</b>	<b>395</b>

**III. Narrative - Provide narrative justification for your intended use of the technology fee funds. Include narrative on how the education or research of the students will be enhanced. Also include how the request aligns with the Strategic Plan of Georgia Tech. Continue in the block below if necessary.**

<p>Massive data analysis now is an expected ingredient of many computing, science, and engineering courses. In line with the campus strategic goal of providing an education that produces leaders and innovation, the School of Computational Science and Engineering (CSE) requires platforms that can support both current and emerging, next generation data analysis tools. Educating with current tools and platforms like Hadoop produces students that serve current industry needs, but pushing forward to future systems like Georgia Tech's STINGER and FODAVA testbed produces students who will lead industry and research. Many systems on the forefront of data analysis use large amounts of fast, shared memory tightly coupled to processors, storage, and accelerators. CSE proposes to acquire large memory platforms to support the interdisciplinary courses that are CSE's specialty as well as courses in the College of Computing's undergraduate threads and graduate programs. These systems permit rapid deployment of data analytics for complex, varied data sets, letting courses focus more on what is done while providing easier access to how it's done. Students can follow the development from mathematics to computational expression and then down to the mapping onto hardware. These students will be well prepared to tackle the next generation data problems in bioinformatics, material science, national security, urban planning, logistics, and other "big data" areas.</p>
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**IV. Detailed Budget - Requested Items by Category** List separately list any equipment, software, and other allowable expenses (see Tech Fee Guidelines). There is a formula in the "total column" that multiplies the number of items times the unit price. You may enter a figure into the total column if the unit pricing is not applicable. If you need additional rows, contact the Budget Office to receive a modified form.

Proposed Number of Items	Estimated Price per Unit	Total (\$)
2TB RAM, Dell R920 server, 8TB disk	2	\$57,071
768GB RAM, Penguin Relion 2903GT (can hold 3 accelerators)	3	\$24,186
128GB RAM head node, 8TB of disk server, head node	1	\$7,450
		\$0
		\$0
		\$0
		\$0
		\$0
		\$0
		\$0
<b>Total (linked to the total amount of request line above)</b>		<b>\$194,150</b>

Please return form via e-mail in Excel format to: [tina.clonts@business.gatech.edu](mailto:tina.clonts@business.gatech.edu)

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**III. Continuation of narrative justification, if necessary**

Background from courses on the proposed systems will expose students to cutting edge techniques, and top students will create their own to advance the field. With the background from courses using the proposed platforms, students will be in demand to lead industry or research institutions through the data thicket. The students also will have the background in topics and local tools needed by research programs in core Georgia Tech research areas, increasing the pool of data analysis talent for the entire campus.----Please see additional information, including affected courses and programs, on the attached sheets.