Intro to Java

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CRA DMP 2008
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Objectives

- LIT Review:
  Preliminary Analysis of Factors Affecting Women and African Americans in the Computing Sciences
  Author: Jamika D. Burg, Tiki L. Suarez
  - Motivation
  - Solution Proposed
  - Evaluations
  - Contributions
  - Future Work

- Week Work Load
  - Outline
  - Work Completed
  - Problems
  - Lesson Learned

- Next Week
### Literature Review

Motivation: Not enough women and African Americans in the field of computer science

#### Ethnicity of Bachelor's and Master's Recipients

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Bachelor's (CS and CE)</th>
<th>Master's (CS and CE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Americans</td>
<td>515</td>
<td>136</td>
</tr>
<tr>
<td>White</td>
<td>8,335</td>
<td>2,249</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,317</strong></td>
<td><strong>8,536</strong></td>
</tr>
</tbody>
</table>

#### Gender of Bachelor's and Master's Recipients

<table>
<thead>
<tr>
<th>Gender</th>
<th>Bachelor's (CS and CE)</th>
<th>Master's (CS and CE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13,081</td>
<td>5,882</td>
</tr>
<tr>
<td>Female</td>
<td>3,022</td>
<td>2,160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19,772</strong></td>
<td><strong>9,640</strong></td>
</tr>
</tbody>
</table>
Solution Proposed: Develop strategies to attract and retain

Recommendations:

- Develop and increase the number of partnerships to improve teaching methods
- Use our own educational resources
- Work with high school counselors, teachers and churches
- Provide support groups for women and African Americans
- Increase awareness of the different pedagogical strategies
- Increase positive media to display computing sciences departments and programs in interesting and creative environments
## Literature Review

### Evaluations

| Factors Affecting Percentage of Underrepresented Groups Studying Computer Science |
|---------------------------------|-----------------|------------------|
|                                 | Social          | Cultural         | Financial                    |
| **African Americans**           | • Teaching Method • Nerdy Perception | • Society dictates career and educational goals (More research required) | Financial assistance |
| **Women**                       | • Intimidation In the Workforce/Teaching Method • Nerdy Perception | • Not enough female role models • Male Dominated Field | Financial assistance |
Contributions

- Growing number of support organizations
- Recruitment programs for African Americans
- Increased awareness of underrepresented groups in computer science
Literature Review

- Developing better research tools to analyze the problem
  (Ex: Institute for African–American Eculture)
The Plan

- Summer 2008 Project: Dance Tool Project
  - Objective: Teaches computer science code using 3D dancing graphics
  - Plan for this week: Complete mini Java assignments
Mini Assignment #1: Hello World
Mini Assignment #2: Addition GUI in Applet Form
Week Workload

Mini Assignment #3: The Cube:

- Requirements: Lightning, Size Manipulation, Texture, Rotation
Problems

Finding good LWJGL tutorials on-line
Lessons Learned

- Basics of Java
- NetBeans IDE 6.1
- LWJGL (LightWeight Java Graphic Library)
- Better Understanding of 3D graphics
Next Week....

- Finishing the cube
- Mini Assignment #4
- Starting Dance Tool Project
References

*NetBeans: Introduction to GUI Building*
http://www.netbeans.org/kb/60/java/gui-functionality.html.
May 28, 2008.

*Java Tutorials: “Hello World for the NetBeans IDE”*
May 28, 2008

*NetBeans IDE 4.0 Applet Tutorial*
May 28, 2008

*OpenGL Apron Tutorials: The Rotating Cube*
May 29, 2008
Any Questions?