

# SBU CIS SENIORS PRESENT PROJECTS FOR 2020-21

Nine projects demonstrate servant leadership focus

BOLIVAR, Mo. – Southwest Baptist University’s [Division of Computing and Mathematics](#) recently had 31 computing seniors work on and present nine projects sponsored by several leading companies and organizations, including the U.S. Federal Reserve Bank.

“As the new head of the Division of Computing and Mathematics, I was amazed at the work these students have done,” said [Dr. Kevin Hopkins](#), division head and professor of mathematics at SBU. “God blessed us with some great projects and our students completed the projects with quality. As I retire this year, I am glad I got to experience these presentations this year. Our students will take this, and all their experiences from SBU, and go into the workforce prepared to be servant leaders in a global society.”



Senior projects are an annual event for students majoring in computer science, computer information science, cybersecurity, or web systems and design. Over the course of their senior year, students in the CIS area work on cross-discipline teams to develop commercial-quality applications for end-users working in faith-based companies, not-for-profit charities, and leading American companies and organizations.

“It is remarkable to see our seniors present high-quality and professionally done projects that solve real-world problems for real clients,”

said [Dr. Amos Gichamba](#), incoming Head of the Division of Computing and Mathematics. “We appreciate the companies and organizations that have supported these efforts, and provided our students with a launching pad to excel in their computing careers.”

Projects for the 2020-2021 academic year included:

## **Federal Reserve Bank of Kansas City (Mo.) Code-A-Thon**

**Student Team:** Emily Wipf, web systems and design major from Marshfield; Draden Davis, computer information science major from Butler; Hannah Ewing, accounting and information assurance major from Bolivar; and TJ Brooks, computer science and mathematics major from Columbia.

The team worked on the Federal Reserve Bank Code-A-Thon promotional site/hub for the university participants. The web-based statement will facilitate the annual bank-sponsored Code-A-Thon Competition.

"It was a pleasure to work with the SBU team this past year," said Alex LeBlanc '15, from the Federal Reserve Bank of Kansas City. "As an SBU alum myself, it's encouraging to see the senior project program evolve as technology and methodologies change. Despite the virtual environment, the team was able to complete a quality product for our annual Code-A-Thon.

"Additionally, the team went above and beyond by challenging themselves to learn new technologies, as well as conducting several usability tests to ensure the product's usability from various user perspectives."

### **Duck Creek Technologies Dev Ops Tool, Bolivar**

**Student Team:** Max Stoner, computer information science major from Preston; Jacob Chappell, cybersecurity major from Blue Springs; Colby Welch, cybersecurity major from Harrison, Ark.; and Ezekial Page, computer science major from Siloam Springs, Ark.

The team worked on a "dev-ops" scripting and automation tool, which can automate the pull and processing of source files with some logic-based setup and modification for some processes.

### **Bolivar City Government IOT-Enabled Tornado Shelter Activation (Bolivar, MO)**

**Student Team:** Jacob Hake, web systems and design major from Humansville; and Jordan Hillenburg, cybersecurity major from Pleasant Hope.

The team worked on a project for the City of Bolivar and presented the project at the City Council meeting on May 11. The project capitalized on the Internet of Things (IoT) technology to automate the existing manual process to open the doors of the two city storm shelters automatically when the storm sirens sound, or during extreme weather conditions.

"The board was thoroughly impressed by your project and work," said Brent Watkins, the City of Bolivar Fire Chief. "As an SBU alumnus, I am proud to see young men like you continue to represent SBU in such a great way."

### **The App Pros Customer Support System, Springfield**

**Student Team:** Guy Batton, web systems and design major from Bolivar; Stephen Winder, computer information science major from Bolivar; Tyler Nowak, cybersecurity major from Camdenton; and Levi Zustiak, computer science major from Galena, Kan.

The primary purpose of this project was to create a responsive (down to phone) web application to facilitate a line of communication in order to support software clients.

### **Missouri Baptist Credit Union Email Marketing Program, Jefferson City**

**Student Team:** Emma Pierce, web systems and design major from St. Clair; Ben Schulz, computer information science major from Omaha, Neb.; Nathan Hooper, cybersecurity major from Bolivar; and Haley Bahn, mathematics and computer science major from Springfield.

The team worked on a system that mimics Constant Contact email marketing, ties to their current database and updates automatically when MBCU updates their system.

"The senior project for which I participated as a technical contact involved the development of a web application that would allow one of our clients, Missouri Baptist Credit Union, to send templated-based emails to their credit union members," said Maria Meyers, the Technical Liaison for this project on behalf of the MBCU. "The students

were a pleasure to work with throughout the project. They were polite, respectful and adapted quickly. They did an excellent job of communicating and made certain that they developed their code in a manner that would integrate with our existing systems and allow us to expand upon it in the future.”

### **SBU Gameroom Usage Tracker, Bolivar**

**Student Team:** Treyton Davis, web systems and design major from Nevada; Chase Lawrence, cybersecurity major from Harrison, Ark.; David Schmidt, computer science major from Richland.

The team worked on a software solution that will help the SBU Student Life to track game room equipment location and usage.

### **Missouri Department of Revenue, Jefferson City**

**Student Team:** Nathan Schaffner, computer information science major from Collinsville, Okla.; Jackson Brown, cybersecurity major from Bolivar; and Ashley Pearce, computer science major from Billings.

The system facilitated the initiation, approval and final ordering of goods or services including workflow, search capabilities and generation of reports.

“The SBU Capstone Team did an excellent job working with the State of Missouri’s technical needs and with our teams of both IT and Business Staff,” said Diane Prenger, ITSD, State of Missouri, Enterprise Resource Manager. “We at the State of Missouri have always been, and continue to be impressed, by the commitment and creativity the students give to our projects. As an IT Recruiter, I am pleased to see their in-depth knowledge and level of career readiness. They prove to be effective, contributing teams alongside our full-time senior staff.”

### **Bicycle Outlet Website, Springfield**

**Student Team:** Matt Wolf, web systems and design major from Fenton; Sam Lewright, web systems and design major from Bolivar; Thomas Lay, computer information science major from Independence; and Cameron Thomas, cybersecurity major from Stockton.

The team worked on a custom website for the Bicycle Outlet to facilitate used bike sales, an online store, appointment/reservations, how-to videos and local riding news information sharing.

### **Polk County Community Connections Virtual Resource Center, Bolivar**

**Student Team:** Kali Crockett, web systems and design major from Marshfield; Elise O’Banion, computer information science major from Kokomo, Ind.; Jaxon Harvey, cybersecurity major from Carrollton; and Jonathan Steigleman, computer science major from Anchorage.

The team worked on the Polk County Community Connections (PCCC) web-based Virtual Resource Center (VRC). The platform listed information about local agencies, organizations, businesses, healthcare, education, faith-based entities and not-for-profits that could be accessed for information, appointments, contact, assistance and up-to-date information about local events.

“At the onset of the coronavirus pandemic, Polk County Community Connections developed a HelpSite website dedicated to providing ongoing, current information regarding the virus and resources available under the six pillars of the Community Connections umbrella,” said Linda Bunch, one of the project champions. “These include social, mental, physical, economic, educational and spiritual needs. Many hours were dedicated to making contacts, collecting and organizing information, creating the website and making regular updates. We now have secured efforts from Southwest Baptist University senior computer students to build a Community Connections Virtual Resource Center at no cost to be added to the HelpSite website to provide more ongoing non-COVID information. It will compile all information about agencies, resources and community information for easy online access for residents.

“Polk County Community Connections received a \$1,000 Community Grant from the Bolivar Area Community Foundation and a \$10,000 grant from the Community Foundation of the Ozarks. We truly appreciate the dedicated, skilled work of our SBU team that has created our online Virtual Resource Center.”

SBU’s Division of Computing and Mathematics houses 10 full-time faculty members, one faculty associate and approximately 130 students majoring in Computer Science, Computer Information Science, Cybersecurity, Web Systems and Design, or Mathematics. Among evangelical Christian institutions, SBU is one of the leading producers of software engineers in the United States and is the second-largest university computing department in the Missouri Ozarks.

For more information about the Division of Computing and Mathematics, contact Gichamba at (417) 328-1704 or [agichamba@sbuniv.edu](mailto:agichamba@sbuniv.edu).

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PHOTO: SBU CIS students Jordan Hillenburg (left) and Jacob Hake presented their senior project for the City of Bolivar at a recent City Council meeting.

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