NJIT
New Jersey's Science &
Technology University

College of
Computing
Sciences

Capstone Program
Open House

2:30pm-6:00pm
February 5th
CC Atrium

Brochure

connecting students with the real world

Spring 2014 Executive Members

Capstone Director
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Open House Agenda

2:15 pm	Pizza Party
2:30 pm – **3:30 pm**	Sponsors give brief 2-minute introductions about their organizations, their projects and their support & opportunities.
3:30 pm – **5:00 pm**	Students and Sponsors interview each other at Sponsors' tables.
5:00 pm – **6:00 pm**	Finalizing teams and projects selections and allowing the first "scope agreement" meeting between sponsors and their finalized teams.

Industry Sponsored Projects

1. **Doug Colaizzo**
   Marathon Data Systems
   Floor Plan Builder
   Last year's team developed algorithms to convert raster floor plan images into vector images for editing. Students will improve image processing algorithms and build an interface to allow user guided feedback and improvement to the processed images.

2. **Andrew Hines**
   Starship Enterprises, LLC
   Phone app with hooks to a database
   My project has been called the "Holy Grail" of search by someone in the industry. When queried, a database would provide an intelligent response, and data enabling the user to really take action, versus the usual search response where much of the data is useless. Especially important is the GUI interface for the app that would be hooked to the equally important back-end database in order to provide useful output to the user.

3. **Martin Gonzalez**
   NewCo LLC
   Appraisal Database: Analysis and Visualization
   Help residents understand real estate or property taxes. The first step entails constructing and populating a database with a fairly large, State-wide dataset of property tax assessment. The second step entails statistical analysis of this data. The third step entails building a web site to make this data and analysis accessible to residents -- including the use of heat (GIS) maps.

4. **Toykea Jones**
    Johnson & Johnson
    Global Supply Chain Training Enhancement
    In the Global Program Management Office, we are primarily responsible to create processes and trainings for Project Leaders and Finance Leaders who manage and support Supply Chain financials.   We have a need to enhance our current training communication and delivery method for Global Supply Chain users.

5. **Jesse Thomas**
    RDE Systems
    Network Analysis and Redesign
    The capstone team will be given an overview of our network and provided with aggregate data of our network traffic for analysis. The team will analyze this information, reporting results to the project lead, and make suggestions on ways in which network traffic and security can be improved

6. **Jesse Thomas**
    RDE Systems
    Create a survey interface app.
    Create a survey interface that has the ability to display questions and answers from a given database structure. Interface must be able to handle multiple question types, question skip logic, question navigation, and proper storage of responses. Additional features include an offline mode and playing audio.

7. **Jesse Thomas**
   RDE Systems
   Create a survey builder using mobile web framework and HTML5
   Create a survey builder that has the ability to add/edit/delete questions, add/edit/delete options, add/edit/delete correct answer, add/edit/delete skip logic using mobile web framework (like Bootstrap from Twitter or Sencha Touch or PhoneGap or jQuery mobile etc), SQL, JavaScript, jQuery, HTML5, CSS and other web service technologies that work both in offline and online mode.

8. **David Daudelin**
   LightShards
   Finishing GoEditLive Website
   This team will continue last semester's efforts to finish the GoEditLive website.

9. **Betsy Ahl**
   Beyond the Walls
   Fund My Mission
   Students will create a system for Beyond the Walls volunteers to solicit and accept donations to fund their service trips on individualized website pages. The user interface must be straightforward and easy to use, and should interface with Facebook and other social networking sites.

10. **Charles Smith**
    Dovetail
    Test Framework
    Design a Domain Specific language and create a sleek framework that will enable Dovetail to do behavior driven development. Technologies: Java, HTML5, MySQL, JUnit.

11. **Betsy Ahl**
    Beyond the Walls
    Market Basket: Create a Package of Materials to Promote a Growing Nonprofit
    Assist a team of RWC high school students to create a comprehensive, compelling package to explain and promote the mission of Beyond the Walls to prospective volunteers and donors. Materials include brochures, posters, flyers, thank-you cards. Other tasks include logo redesign, website overhaul and video clips.

12. **Betsy Ahl**
    Beyond the Walls
    Follow the Money
    Scour the Internet and other resources for potential sources of funding—large foundations, family foundations, corporations--for which Beyond the Walls domestic and international projects might qualify. Create database that includes include criteria for funding, deadlines, preferred means of submission, contact information, and so on. The spring phase will be followed by a summer phase that will challenge students to submit proposals to promising sources.

13. **David Daudelin**
    Scoutlit, Inc.
    Scoutlit: Redesigned app and website
    Scoutlit now has over 28,000 basketball teams registered with it and we're doing an overhaul of the app and website with more robust coding practices and better design. Students working on this project will get to learn about the latest mobile and web technologies including Angular JS, Responsive Design, APIs, HTML5, and CSS3.

14. **Roxana & Desta Babb**
    Baby Car Monitor
    Through text message alerts and sound notifications, the Baby Car Monitor reminds parents/caregivers that their babies are in the back seats of their cars especially when they have a busy schedule.

15. **Alan Guerrero**
    Power Chess Coach
    Develop an interactive educational mobile application for chess. The application itself will be entirely based on making moves in a progressive sequence of positions, making it unlike any chess tutorial application currently in the market. The project's over all aim is to substantially improve chess skill, in learners who complete the program.

16. **Veer Singh**
    Panasonic Industrial Devices Sales
    Polymer Capacitor Selector Guide
    Work on the selector guide for Panasonic's Polymer Capacitors, interactive and available to the general domain online.

17. **Gus Erazo**
    Panasonic Consumer Electronics
    Wine Cooler/Spirits Chiller Refrigerator
    Redesign an existing wine cooler product   to included a Spirits Chiller function. PCEC product engineering team will provide access to product samples for students' evaluation. Students will be asked to provide their conceptual designs ideas while keeping the product refrigeration characteristics.

18. **Gus Erazo**

    Panasonic Consumer Electronics

    Design Home Security and Device Controller App for Android

    Design an Android based home security app with authentication protocol. App will provide customers the functionality to control IP enabled devices such as a home thermostat device, and electrical and lighting receptacles control devices. Will use Android development kit (Java Script) on Linux OS platform.

19. **Erwin Wu**

    Panasonic Electric Works

    Virtual Interface for Remote Automation Control Application

    Develop an HTML web page and mobile app that will interface with our industrial control products consisting of a webserver, programmable logic controller (PLC), and touch screen (HMI). The project will require that both web page and mobile app be able to monitor and control an industrial application (e.g., control pumps at a filtration plant and monitor temperature to ensure efficiency and safety).

20. **Ildar Nizami**

    Panasonic System Communications

    Local Authentication Web Application

    Provide an automated method to process customer requests through a web interface and generate the key to authenticate their television displays. Local authentication should assist Panasonic technicians and customers to quickly and accurately authenticate the television display within hotels and other lodgings. Information security is a top priority. Safeguards must be put in place to prevent unauthorized access to passwords, email addresses, business addresses, names, phone numbers, and other personal information.

21. **Franck Picard**
    Pop Group Americas
    Online Vendor bidding platform
    Set up a secure online platform where all sales and resellers interact with suppliers and factories to quote for their clients' RFQs online at the same time. 1/ The Pop Group sales & resellers post their client's RFQs. 2/ Vendors quote simultaneously. 3/ Whoever quotes/bids the lowest will get the order/production. Each bidder would anonymously see what the other bidder bids. This is to ensure our resellers and in-house sales always quote competitively.

22. **Lanisha Makle**
    City of Paterson
    Track a Vacant/Abandoned Property
    The City of Paterson has over 900 vacant and abandoned properties. We are looking for a way to include the community in the cataloging and status of these properties throughout the City. This application would be used to allow for the community to nominate properties for the Vacant and Abandoned Property List, and track the status of the property as it goes through the various stages of the re-development process.

23. **Ellen Badinelli**
    ScanAvert, Inc.
    ScanAvert
    ScanAvert is a mobile app that delivers product information on users' smartphones based on their health/dietary criteria. As an added service, we auto-notify them if any product in their scanning activity is recalled. Project will develop a webservice that sorts these inquiries by region/location and direct them back to that location's food/safety inspection office for further investigation.

24. **Dr. Ronald Chamberlain**
    St. Barnabas Medical Center
    Website Design for Clinical Outcomes
    The purpose of this project is to create a website that can facilitate communication between student and mentors on research projects. The website will display information in a well-organized format. There is a currently a website that can be used as a referral, and the task is to get create an enhanced and simpler version of the same.

25. **Dr. Ronald Chamberlain**
    St. Barnabas Medical Center
    Online Lecture Series
    Creation of on-line lecture series - This is the education aspect in which medical students will view to study and learn about medical practices, and more. This is similar to NJIT online classes which are done through iTunes. It is creating a series of lecture to certain topic (which can range from medical practices and studies) to educate medical students.

26. **Dr. Ronald Chamberlain**
    St. Barnabas Medical Center
    Web Design
    This project deals with the redesign of the St. Barnabas Medical Center's Surgery website.

27. **Dr. Ronald Chamberlain**
    St. Barnabas Medical Center
    GI Center Video
    This will be footage of patient stories as well as an informative film that elaborates on the surgical, medical, and radiation oncology care for cancer patients. The creativity will be based on the team producing the film which can be taken in many directions.

28. **Dr. Ronald Chamberlain**
    St. Barnabas Medical Center
    Electronic Resident Portfolio
    C an all-electronic resident portfolio for the residents at St. Barnabas Medical Health Center. The electronic portfolio will store information regarding the residents including but not limited to their credentials, categories of credentials, biography, certifications, publications and resumes. There will also be an evaluation tab for the Doctor's to evaluate the residents. The summative evaluations will be displayed on an app which will pull the data from the site.

29. **Samantha Singh**
    St. Barnabas Medical Center
    Scenario-Based Quizzes
    Create a customized quiz that focuses on the areas in need of improvement. Identify scope of practice for various disciplines with inter-professional integration. Track device of participant (fingerprint, name, employee number, generic numberin) with history and performance rating of 1-10 (assess understanding of content). Interaction recoded during task and viewed upon completion by the participate for self-evaluation & self-awareness with debriefing.

30. **Georgine Lacey**
    St. Barnabas Medical Center/ NJ Perinatal Associates
    Trend Monitoring
    To monitor patient demographic trends, such as home addresses mapped to NJPA office site in a heatmap format to measure needs of current and potential areas for new patients; referring provider source locations and volume.

31. **Gary Patnosh**
    Jersey Explorer Children's Museum/NJ Youth Corp
    Designing the Future
    This project will focus on creating designs that incorporate technology in museum exhibits to exemplify different cultures and subject matter. Students will be able to design different exhibits suggested by the Director in creating functional and effective ways of showcasing aforementioned topics and focus on utilizing technology in design architecture practices.

32. **Gary Patnosh**
    Jersey Explorer Children's Museum/NJ Youth Corp
    Touch-Based Software Package
    The museum will be focusing a part of its efforts on integrating touch screen technology and interactivity into its exhibits. Currently, students are tasked to create an interactive experience or game that children can play to learn more about an array of topics.

33. **Gary Patnosh**
    Jersey Explorer Children's Museum/NJ Youth Corp
    Kickstarter with Database System
    This project will focus on helping the museum create a strong online marketing campaign to help create a Kickstarter program to raise money for the museum. A team of students are tasked to first create a video with the help of museum volunteers and NJ Youth Corp to help excite and showcase what the museum offers as well as help create a database for museum staff to communicate and follow major contributors.

34. **Gary Patnosh**
    Jersey Explorer Children's Museum/NJ Youth Corp
    Redesigning "The Final Frontier"
    One of the major tours in the current East Orange Museum is a simulated scientific experience that has students working together as a team and learning about different technologies in the process. The project will include creating a new experience that uses both film and technology together to create an interactive experience that will focus on teamwork and importance of different roles in an organization.

Entrepreneurial Projects

35. **Douglas James**
    Vector Speech
    Inner Voice
    Make an app that can be used to help people with developmental disabilities and who otherwise are incapable of speaking to communicate. A person can use icons and pictures that are associated with words that the app then will synthesize into sounds and output via the smart device's speakers.

36. **Vadym Apostolyuk**
    Inferno Bits
    Smart Home Security System
    Create a simplified home security solution targeted at the average consumer. This device is designed to be a small, all inclusive portable wireless device that incorporates multiple internal sensors. If a problem is found, an alert is sent to a user through a smartphone application.

37. **Richard Rifino**
    InnovaTech
    InteracTable
    The InteracTable is an interactive, multi-touch table capable of running an Operating System experienced on a desktop or mobile environment. Users will be able to use this innovative product to surf the web, access applications and run programs, view/run media applications, video chat, and much more.

38. **Nicholas Zonak**
    Scribble
    Autistic Education App
    This will be an app to help autistic and learning impaired children communicate and learn through visual and audio cues. It can be difficult for certain people to learn, and we intend to make a more modular app to support learning through text-to-speech and images correlating to different words.

39. **Ryan Wolfrum**
    Wolfrum Labs
    Task Scheduler and Notifier
    Task Scheduler and Notifier, is a system where a user or organization would be able to keep track of daily tasks that are either assigned to them by an employer or are created by the user. The system would also work on preventing overlapping task and in the cases of a multi-user system it would assign the task to another user.

40. **Louis Saporito**
    ComicPop
    ComicPop
    ComicPop will utilize augmented reality to enhance the experience of graphic medias such as comic books, graphic novels, magazines, and many more. The app will also allow for a level of interactivity using digital buttons that will effectively turn the physical media into a touch pad.

41. **Michael Sullivan**
    Starfall Games
    Sneaky Ninja
    Sneaky Ninja is a 2D stealth platformer being made in Unity3D for the PC. Utilize an arsenal of weapons, abilities, magical powers, and your own cunning wit to outsmart the enemy and defeat them from the shadows. The main focus of development would be on the many tools given to the player, level mechanics, enemy AI, and a fully-featured level editor that allows players to create their own levels.

42. **Steven Donnelly**
    Red Star Development
    Kosmos 434
    Kosmos 434 is a first person shooter set in space. In addition to the demo, if possible, I would like to recruit a group of web designers to make a website to promote the game. Finally, once the demo and website are complete I intend to post the project to the Kickstarter website and hopefully gain enough funding to produce the full production game.

Capstone Students

Yousef Abbasi
Keegan Acquaotta
Gregory Alfano
Vadym Apostolyuk
Diane Avecillas
Omar Awad
Jose Baez
Alexander Bartolo
James Bell
George Benavente
Michael Bianci
Michael Bobroski
Joel Brower
Mauro Carrillo
Jonathan Cassidy
Ruben Castano
Christopher Castellano
Keifer Celestino
Sharbel Chalhoub
Faisal Chaudhri
Yvonne Chen
Hsiang-Ling Chien
Daniel Choi
Alyssa Cortez
Jonathan Dacosta
Dhruvin Desai
Steven Donnelly
Ahmed Elsayed
Brian Evans
John Flett
Matei Gheorghiu
Hilton Gooding
Bernard Gray
Steven Greco
James Griffith
Zachary Grossi
Garvin Guan
Douglas Haber
Alex Hall
Colby Heater
Arthur Hinds
Robert Houdlette
Cynthia Irungu
Paola Islas
Douglas James
Ruifeng Jiang
Olga Kanevskaya
Samdisha Kapoor
Evan Kelly
Rafal Kierznowski
Alexander Koenig
Niyati Kohli
Jason Kornegay
Tsz Li
Kemario Lindo
Jonathan Lozano
Tai Ma
Max Macavilca
Andrew Maczka
Shaikh Mahmood
Karthik Marpadga
Natalia Melibeu
Nehal Mascarenhas
Georgina Matias
Romer Medina
Vidhi Modi
Sheldon Monteiro
Justin Munier
David Ness
Gary Ng
Damian Niedzielski
Andrea Noble
Laura Odhiambo
Brian Oparah
Anthony Outeiral
Ahmed Pasha
Chirag Patel
Devanshi Patel
Hemang Patel
Niravkumar Patel
Samapti Patel
Christopher Pereira
Samuel Pesce
Vikram Ramkumar
Srihari Rao
Chris Ray
Richard Rifino
Samuel Roberts
Nikko Roy
Michael Ritacco
Jeremy Salant
Richard Salmeron
John Rozger
Jon Lenard Santos
Louis Saporito
Matthew Sanabria
Jay Shah
Mohammed Shah
Justin Sealy
Brian Shepard
Mickey Sheth
Pooja Shah
Radoslaw Siwik
Wesley Stanulis
Tristan Sinofsky
Giaspur Tabangay
Sonam Thakurani
Michael Sullivan
Aloma Tomlinson
Alexander Torres
Harsha Thotakura
Emmanuel Velez
Vladimir Ventura
Firuz Ulmasov
Joshua Villahermosa
James Wolff
Alberto Vergara
Jason Yen
Abdullah Yousafzai
Ryan Wolfrum
Justin Zamora
Eric Zebrowski
Yaqoob Yousafzai
Nicholas Zonak