Project Mixer

Introduction to Databases
CompSci 316 Fall 2018
Announcements (Tue., Sep. 25)

• Homework #1 sample solution posted on Sakai
• Homework #2 due in one week!
• Check Piazza for updates on office hours this week!

• Please fill out a Google survey on RATest!
LegiToken team from Fall 2017

- Stuart Baker
- Austin Carter
- Alex Gerrese
- Oscar Hong
- Trenton Large (graduated)
- Joshua Young
LegiToken, Revisited

CS316
September 2018

1. What we built & why
2. Our progress since
3. Learnings & advice
The Team

OSCAR HONG
“When do we monetize?”

STU BAKER
Backend god

ALEX GERRESE
Pixel perfecter

AUSTIN CARTER
Chief Visionary

JOSH YOUNG
Lives and breathes CSS

TRENTON LARGE
Works at Microsoft
LegiTToken

Making cryptocurrencies safer and more accessible to everyone.

MARCH 2018
Problems in the Wild West of Crypto

Bitconnect, which has been accused of running a Ponzi scheme, shuts down

Cryptocurrency start-up Confido disappears with $375,000 from an ICO, and nobody can find the founders

The SEC's Cyber Unit Launches Its First Fraud Case, Targeting PlexCoin's ICO
### Problems in the Wild West of Crypto

<table>
<thead>
<tr>
<th>ICO Alert</th>
<th>Status</th>
<th>Description</th>
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<tr>
<td>ICO Alert</td>
<td>SteX ICO opens in less than 36h</td>
<td>Token Market SteX Token sale opens on 31st Oct 2017. About SteX Exchange Aggregator Please note that...</td>
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<td>TokenMarket EtherParty Token sale closes on 31st Oct 2017. About EtherParty User-friendly smart contract platform...</td>
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<td>Hazza ICO closes in less than 36h</td>
<td>TokenMarket Hazza Token sale closes on 31st Oct 2017. About Hazza Global Unified Payment Network...</td>
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LegiToken Engine

- Sentiment Analysis
- Team Strength
- Whitepaper
- Expert Reviews
- Token Sale Terms
WHITEPAPER STRENGTH
Follows industry best practices and technical due diligence.

TOKEN SALE TERMS
Token Sale Terms: Founder lock-up period? Usage of funds. Legal terms and conditions.

TEAM STRENGTH
Team strength: an analysis of team credibility and mindshare score across various platforms like LinkedIn.

EXPERT OPINIONS
What are the blockchain influencers saying about each ICO?
EXISTING SOLUTIONS ARE

Confusing    Ugly    Cluttered    Sketchy
Invest in the best, no more scams.
Detailed analysis on ICOs, so you know your money is safe.

Intuitive design
Homepage search bar
Discover current and upcoming ICOs
Glanceable information
Bankex (BXX)

A Proof-of-Asset Protocol that brings together Bank-as-a-Service and Blockchain technology to evolve capital markets. Tokenization of real-world and financial assets.

ICO information

Red/Yellow/Green Light

Section-by-section breakdown

Links for more info
SENTIMENT ANALYSIS

Crypto markets are largely dependent on the opinions of stakeholders.

Sentiments give an opportunity for stronger predictive power of the market behavior.
1. Scrape Twitter and Reddit posts
2. Filter by relevant tokens
3. Analyze posts using trained sentiment model
4. Weight score by subjectivity and polarity

**Next Step:** TensorFlow neural net that performs multivariable regression to predict future market values for tokens.
Life after CS316
Lemma
Logo Visual Identity

KNOT
security foundation trust

LINKS
connection technology

BLUE
trust openness

Roboto Condensed
AaBbCc
LETTER SPACING: 90

#55B5FF
#4C9FD8
#153B59
Logo
Redesign
Starting Up

**Customer Discovery**

Comfortable buying existing crypto, but afraid of ICO scams

**Considers:** Hype, market trends, hype, backers reputation, whitepaper

**Sources:** Friends, Reddit, Twitter, Crypto blogs

**Pain:** Time-consuming research, difficult to find worthwhile ICOs

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**Market Opportunity**

- **All investors:** $10B+
- **Crypto investors:**
  - Institutional investors: ?
  - Crypto enthusiasts: $60M

- **$600M**

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**Competitive Landscape**

- **LEMMA**

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- **usability and design**
- **comprehensiveness of the rating algorithm**
ICO information • Red/Yellow/Green light • Links for more info • Section-by-section breakdown
How to Choose Teams & Divide Roles
Getting Everyone to Work
Questions?

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Facebook: facebook.com/dukecatalyst
Instagram: @dukecatalyst

Brian: brian.li@duke.edu
Vicki: vicki.lu@duke.edu
Hugh Thomas

Team lead for mobile development at the Office of Information Technology
Duke OIT Mobile Apps

Hugh Thomas
/OIT/ESSWeb/Mobile Applications Group
Duke OIT – Mobile Applications Group

• iOS & Android Mobile app developers
  • New team inside OIT (formed 2016)
  • Many mobile app projects
    • DukeMobile App
    • Alumni App
    • Giving App
    • Emergency Alerts App

• We develop campus-wide apps & utilities
CS316 Project meeting 9/25/18
The Garden Gateway project

• $30M initiative to create enhanced facilities and spaces that will enrich the visitor experience and strengthen ties to Duke University and the Durham community
  • Duke Gardens is Durham’s No. 1 tourist attraction
    • Over 300,000 visitor per year

• This project is an app to help support this vision
  • App will combine location & computer vision with plant database for unique Duke Gardens experience
    • Identify plants
    • Seasonal guides/special events
    • Fun shared visitor experiences
      • Scavenger hunts for children
iOS app as a Visitor Guide to Duke Gardens

• Get hands on with iOS/Swift mobile app development
  • Technology components you will use:
    • Location awareness / Computer Vision / Image recognition / Machine Learning
    • Use plant image database to create/customize our own plant classifier
    • OIT’s Mobile App Group will share techniques & tips on how to build Duke apps
  • UI/UX design & creation
    • You define feature requirements & user experience

• 2 Phase project
  • Phase 1 - Standalone app Duke Garden visitors (~300,000 per year)
  • Phase 2 – potential to integrate with DukeMobile/Alumni App (+100,000 users)
Michael Faber
Manager of the Duke Innovation Co-Lab

See https://colab.duke.edu/
Tech company information platform

Motivation
Help students recruiting for tech companies by providing a convenient platform

How do we plan to acquire the data to populate our database?
Scraping data from online archives and websites

What kind of queries do we want to ask?
Company name, location, contact(email, phone), number of employee, field, jobs, etc.

Members: Jeff Kim, Tim Jung
Contact: ek111@duke.edu or cj110@duke.edu
Ryan Piersma

LinguisticDB

- A database for computational linguistics! (Based on text)
- Possible datasets: Project Gutenberg, song lyrics (from Google searches), MLDb (music lyrics database)
- Example simple attributes: Word, letter, sentence, paragraph counts
- Develop metrics for comparing authors, analyzing writing style
- Could branch into using different languages

Ryan Piersma (ryan.piersma@duke.edu)
Elizabeth Bartusiak
316 Project Pitch

By: Elizabeth Bartusiak
eeb50@duke.edu
Problem:
Solution:

- Duke specific
- Mobile app that tracks items
  - Both lost items and found items
    - What is it? Where? When? Where to pick it up?
- Database queries for lost items
What I’m looking for...

- Experience with app development (Android)
- Experience with DBMS
- UI XP
- Willing to collaborate
- Willing to dedicate time to this product
- NOT willing to do everything in the final week
Brian Nieves & Sherry Feng
Duke Tech Incubator
Brian Nieves + Sherry Feng
Our Mission:

Create an effective pipeline from technical projects generated in hackathons, class projects, and startups to future development.
Our Database Challenge

- Allow for professors, students, and projects to be matched to each other
- Track projects and their matching students/professors, along with a meeting schedule
- Provide a platform for professors to manage the projects they mentor, including setting up independent study projects
Database Outline

**Projects**
- Project Description
- Membership
- Matched Professor
- Project Status

**Professors**
- Name, Contact
- Field(s) of interest
- Matched Projects

**Students**
- Name, major, etc.
- Project(s) involved in
- Roles in projects
Save the kids projects! Join DTI!

brian.nieves@duke.edu