Talent for IBM Z
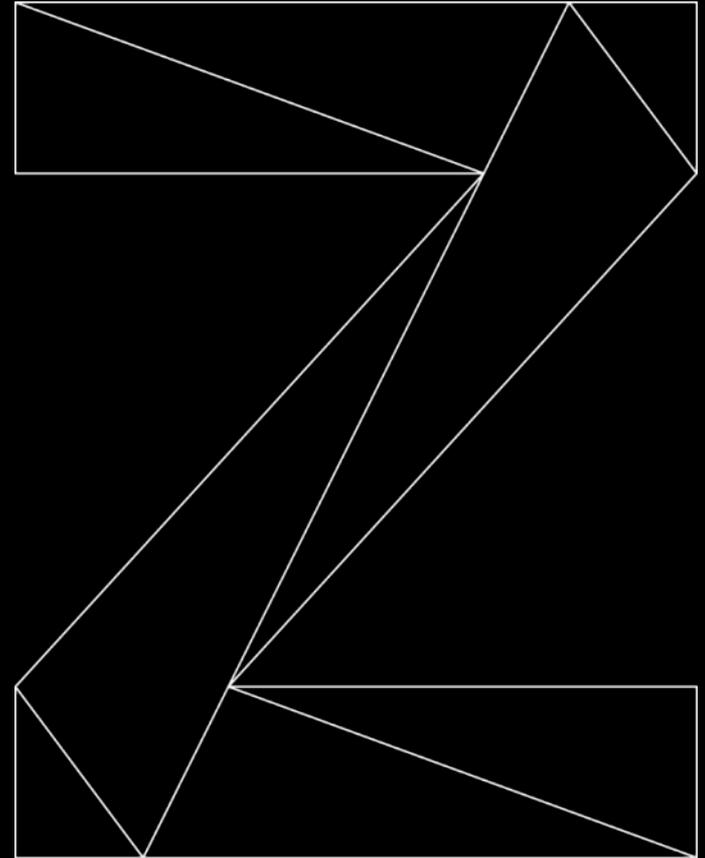
July 2018

Misty Decker
Program Manager, IBM Z Academic Initiative
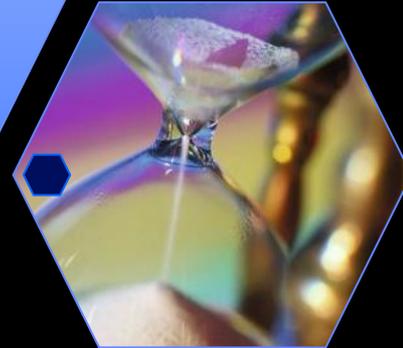misty@us.ibm.com
@mistyMVD

IBM Z

Today's environment

@46,000 ComSci Graduates/year in the US[2]

84,000 open mainframe positions by 2020[3]

10,000 Baby Boomers Retire Every Day[1]

driving technical skill needs

The mainframe is not merely essential to an organization, it is essential to the global economy
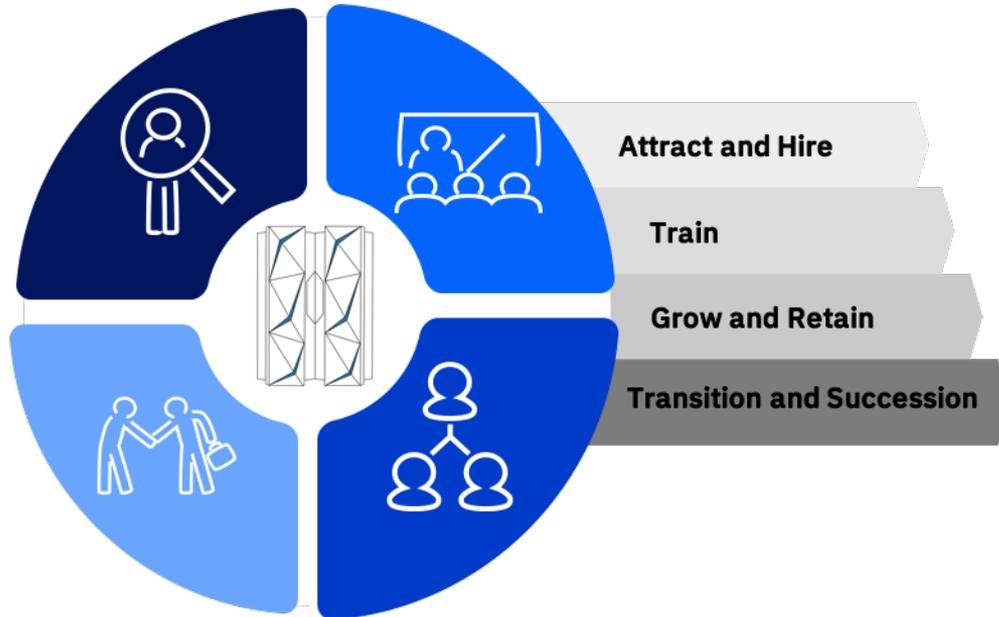
- 80% of world's data
- 44 out of top 50 worldwide banks
- 10 out of top 10 insurers
- 23 out of top 25 retailers
- 90% of largest airlines
- 87% of all credit card transactions, $7.7 trillion per year

Z community strong and growing

Developer Engagement in 2017. Engaged over 40,000 developers and students through IBM Z virtual contests, academic courses, user groups, conferences, Tech Talks, Code Patterns and more. Conducted the first-ever mainframe-based global developer hackathon, Unchain the Frame, with 1,400 contestants building applications with Hyperledger Fabric, Docker, Machine Learning and Banking and Retail APIs.

Student Training in 2017. Trained over 27,000 students in IBM Z topics through Global Training Partners and more than 225 developed mainframe courses. 12,000 students participated in the Master the Mainframe global contest across a record 129 countries with approximately 80% new to the contest and the platform. First German Intro to Mainframes MOOC released in partnership with HPI and the Academic Mainframe Consortium attracted 3,795 students.

Cultivate Talent for IBM Z

- Attract and Hire
- Train
- Grow and Retain
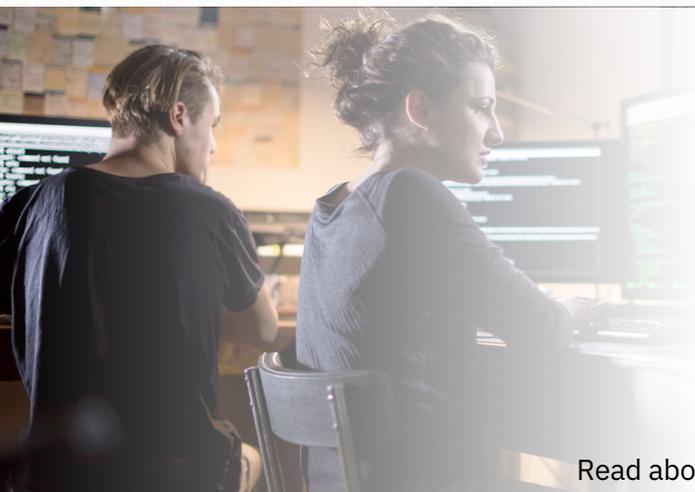- Transition and Succession

Develop a Z Talent Strategy

- Assess short-term and long-term skills needs
- Determine types of candidates to address the needs (college hires, apprentices, experienced hires, internal transfers)
- Develop a plan to attract targeted talent
- Build a training program that supports a successful career path
- Provide a positive environment to enrich, grow, and support new talent

Cultivate Talent

Resource links to help your company

● = Newly Added

Learn more at ibm.biz/zskills

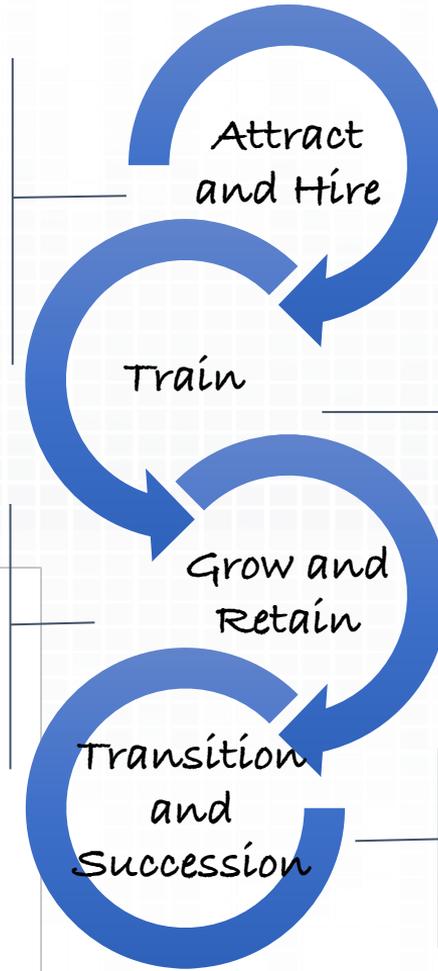## Find Talent
- Academic Initiative Schools
- **●** Talent Match
- Master the Mainframe Wall of Fame
- Open Mainframe Project
- Jobs Board

Qualify Talent
- MTM Learning System
- Digital Mainframe Badges
- Mainframe Foundation Test

Build Eminence
- **●** Become an IBM Champion
- IBM Conferences
- User Groups - SHARE
- Z-Related Community
- Gen Z Workshops
- Z Council Meetings
- **●** Facebook Live - Z recent hire insights
- New Faces of Z
- Advocacy Hub
- Mentoring

Attract and Hire

Train

Grow and Retain

Transition and Succession

Train for No Cost
- MTM Learning System
- z/OS Introduction Workshop
- Intro to z/OS Videos
- **●** z/OS YouTube Videos
- CICS Redbooks Courses
- Mainframe Playground
- **●** MOOC
- **●** Intro to IBM z/OS for IT Professionals
- **●** IBM z/OS FastTrack for Beginners
- Code Patterns

Train for a Fee
- IBM Skills Gateway
- **●** Tech U - z/OS for Rookies
- Mainframe Apprenticeship Program
- IDCP Certificate Programs

Access IBM Z Systems
- LinuxONE Community Cloud
- IBM Z Trial Program

Transfer Knowledge
- Transition to teaching
- Key steps for passing the torch
- Share expertise

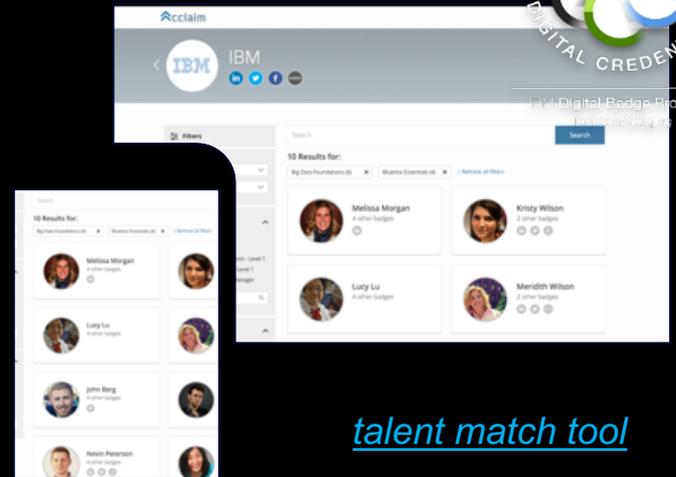Read about IBM's skills initiatives in Ross Mauri's recent Blog

Talent Match to find verified mainframe talent

- **Search the IBM Acclaim skills database** for candidates who have opted in

- **Find candidates** from your desktop, laptop, tablet or mobile phone

- Automatically **generate a digital resume** of verified skills

- Quickly sort by **skills, location** and **credentials**

- **Inspect** LinkedIn profiles, Twitter feeds and Facebook threads

- **Send a private message** and instantly to begin to communicate with candidates

talent match tool

"I had the privilege of working with Novell in the late 80s to develop the concept of IT certification, and I think the work we are doing with IBM Talent Search is even more important!"

~Clarke Porter, Vice President, Pearson

Explore our Skills for IBM Z Website

Learn

Meet a developer in the financial industry – one of the new faces of IBM Z

▷ Become a Mainframer (Youtube, 03:22)

Start learning on virtual platform and earn open badges

→ Master the Mainframe

Enrolled students get 44 hours of online courses and earn open badges

⎘ Access free e-Learning

Got mainframe skills? Post your resume on the IBM Z Job Connector

⎘ Find a job

Join the IBM Z Student Advocacy Hub to learn and connect

⎘ Join the community

Explore the latest tech with IBM Z developer code patterns

→ Start coding

Teach

Find presentations, labs, quizzes and more for over 25 courses

⎘ Access courseware

Get free access to z/OS and Linux on z for hands on exercises

⎘ Access systems

Email details of your available courses to share with employers and student

→ Promote your program

The Educator QuickStart offers everything you need to get started

PDF Use the guide (425 KB)

Incorporate the on demand learning system or contest into your class

→ Master the Mainframe

Join the IBM Z Advocate Community to stay connected, learn and share

⎘ Join the community

Employ

Universities worldwide offer mainframe education and talent

PDF Find mainframe talent (278 KB)

Find resources to help you recruit, train and retain IBM Z skills

PDF Employer Reference Guide (417 KB)

Use the IBM Z Job Connector to find IBM Z mainframe skills

⎘ Post a job

Access to technical training for your employees

→ Explore the Skills Gateway

Engage local students, learn and connect with the Employer Advocacy Hub

⎘ Join the community

Connect your young professional mainframers through Gen z programs

⎘ Gen z programs

Your One-Stop Skill Shop!

ibm.biz/zskills

Educator Options

Create a New Class

- OnTheHub.com/IBM
- Enterprise Computing Kickstart
- System Access

Update a Class

- Master the Mainframe
- Redbook Videos
- IBM Z Trials
- Code Patterns

Campus Events

- MtM Meetup
- Blockchain Workshop
- Blockchain Hackathon

Events

- IBM zCouncils
- SHARE Student Career Days
- IBM Tech U Student Career Day

Connect

- Advocacy Hub
- IBM Z Jobs Board

MASTER THE MAINFRAME

Virtual, Challenge-Based Contest and Curriculum for Students

- 17,000 Students
- 120+ Countries
- 23% Female Participation
- Digital Open Badges
- Employer Talent Match

Top 3 Global Winners

Anna McKee
University of North Texas

Murilo Andrade
Universidade Federal de
Sao Carlos

Sebastian Wind
University of Leipzig

"It's All About Skills Development and Opportunity"

Why Master the Mainframe for education

Sample Platter
- Introduction to variety of topics
- Supplements class topics

Resume Building
- Employers search for "Master the Mainframe"
- Badges for finishing Part 2 and Part 3

Hands On
- We create it and update it every year
- We maintain the system and answer student questions
- We even send you a weekly report of student progress

How to use Master the Mainframe for Education

When
- Contest open Sept to Dec 31st, students earn prizes
- Learning System open year round, same challenges and badges, no prizes

Options
- Part 1 (2 hours) required HW, Part 2 & 3 Extra Credit
- Part 1 & 2 required HW (15 – 20 hours), Part 3 Extra credit
- Full contest as independent study course

Which Courses
- Freshman Intro Course or AP Computer Science Principles
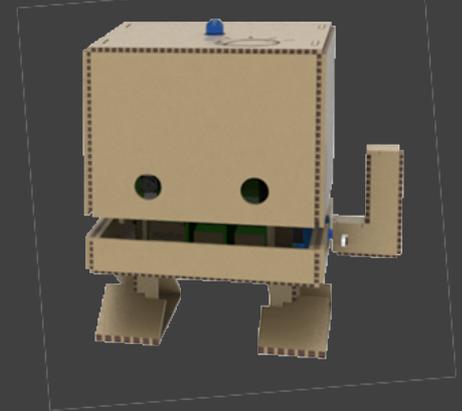- Operating Systems or Programming
- Database or Analytics

ibm.biz/mtmfacultyguide

![IBM logo]

Activity Kits

ibm.biz/activitykits

Master the Mainframe

| Computing Club | Weekend Hackathon | School event |

Made by IBM Volunteers

| Quantum Board Game | Chatbots for Good |
| Intro to Cyber security | Ski Jump for Engineers |

For class or club

| Trading with Blockchain | Accessibility in Design |
| CodeYour Toybox | Let's Talk Cyber-Bullying |

Be a Z Legend

Worldwide

Week of Code

Featuring Master the Mainframe

Anyone age 13 and up

No experience necessary

Register as a facilitator

- ibm.biz/zlegends

Pick a school or organization

- High School
- Community College
- University
- Computing Club
- Local Library
- Girl Scouts or Boy Scouts
- Community
- … anywhere

Find a date, time and location

Advertise

Participants Get

- Valuable skills
- Differentiator for resume
- Master the Mainframe badges

Facilitators Get

- Limited Z Legend T-Shirt
- Facilitator Badge

Have fun and become a Z Advocate

Bite Sized Challenges...

Engaging, fun digital interface to encourage developers to learn and try our solutions and progress them to community advocates.

Ambassador Experience

- ibm.biz/zambassador
- Hints and Tips
- Exclusive Discussion board
- Targeted offers

Coming Soon!

- Faculty Experience
- Student Experience

IBM Z   LEARN • SHARE • CONNECT   IBM LinuxONE

/hackZone
hello world

/hackZone Playground

Test your skills or just have fun learning! Spark, Blockchain & Open Source hands on hello world...

READY TO CODE!

All about Blockchain!

Everything Blockchain, all in one place....Learn, get hands on experience and share with local...

READY TO LEARN!

Help a Student

Give back to your community and inspire a future mainframer! Mentor educators, Volunteer for a Guest...

READY TO HELP!

ibm.biz/zadvocate

Encourage students to explore no cost learning options

IBM Z Enterprise Computing Kickstart Offering

- For students and faculty
- Over 40 hours of free e-learning
- Visit On The Hub
- Get your summer intern trained today!

Register Today

Recognize, Verify, Display

DIGITAL CREDENTIALS
DIGITAL CREDENTIALS

IBM Digital Badge Program
ibm.com/badging

15

10

Faculty Course Materials – ibm.onthehub.com

System Access

Faculty System
Request access from zSkills@us.ibm.com

- z/OS w/ TSO, ISPF and SDSF
- IBM Developer for z (IDz)
- COBOL, Assembler, REXX, Java, C/C++
- Limited authority to DB2, CICS

Customized System
Request Access from zSkills@us.ibm.com

- z/OS environment with latest maintenance
- Full authority to DB2 and CICS
- Customized Security Privileges
- Apache Spark

LinuxONE Community Cloud
Register at ibm.com/linuxone/try

- Linux (RedHat, SUSE)
- 2 virtual CPU, 4 GB memory and 40 GB of storage
- Blockchain, Docker, etc

OpenMainframe Project: Mainframe awareness through Linux and Open Source

- Bringing Linux and Open Source education on the mainframe to academic institutions will produce the workforce of tomorrow.
- Initiatives include:
  - Sponsored internship program in Summer 2016
  - Partnership with Linux Foundation Training to help educate faculty and students on Linux and Open Source
  - Partnership opportunities between Open Mainframe Project and academic institutions for real life self-study and class project programs

Membership is free for Academic Institutions

Find out more at www.openmainframeproject.org

How to Join the Open Mainframe Project

- Find out more the Project at www.openmainframeproject.org

- Fill in the online form for more info: https://www.openmainframeproject.org/about/join

- Alternatively contact John Mertic at the Linux Foundation: jmertic@linuxfoundation.org

- Research other Linux Foundation Collaborative Projects: http://collabprojects.linuxfoundation.org

Research Collaborations

Industry identifies a project

- Can be completed in a semester (or two)
- Uses HW/SW resources available to school
- 4th year college students have the skills or can learn

University identifies students

- Students have the skills and talents to do the project
- Either capstone course or as a stipend funded project

Ongoing support

- Faculty provide ongoing support and skills enhancements
- Industry partner provides technical expertise and industry direction

Benefits

- Students learn skills in a real-world context, build resume
- Industry has prototyping that is more affordable than doing in house
- Students already skilled in new technology ready for hire

Shifting Perception Next Z generation

From Military to Mainframe

Generation z Mainframers – Not the Unicorns
We Think They Are

Bringing new blood to the mainframe: A millennial's
perspective

Think Millennials don't want to work in mainframe? Think
again

New Faces of Z

Article

Become an IBM Champion – NEW!

IBM Champions demonstrate both expertise in and extraordinary support and advocacy for IBM technology, communities, and solutions.

The IBM Champion program recognizes these innovative thought leaders in the technical community and rewards these contributions by amplifying their voice and increasing their sphere of influence.

IBM Champions are enthusiasts and advocates: IT professionals, business leaders, developers, executives, educators, and influencers who support and mentor others to help them get the most out of IBM software, solutions, and services.

IBM Champions are not employees of IBM.

https://developer.ibm.com/champions

Dr. Cameron Saey, North Carolina A&T was recently announced as an IBM Champion for Z for the terrific work that he does in attracting new students to the mainframe and advocating on behalf of the platform. He was helpful in getting the Federal grant for the mainframe apprenticeship program. Here's a link for an article that was written about it last year.
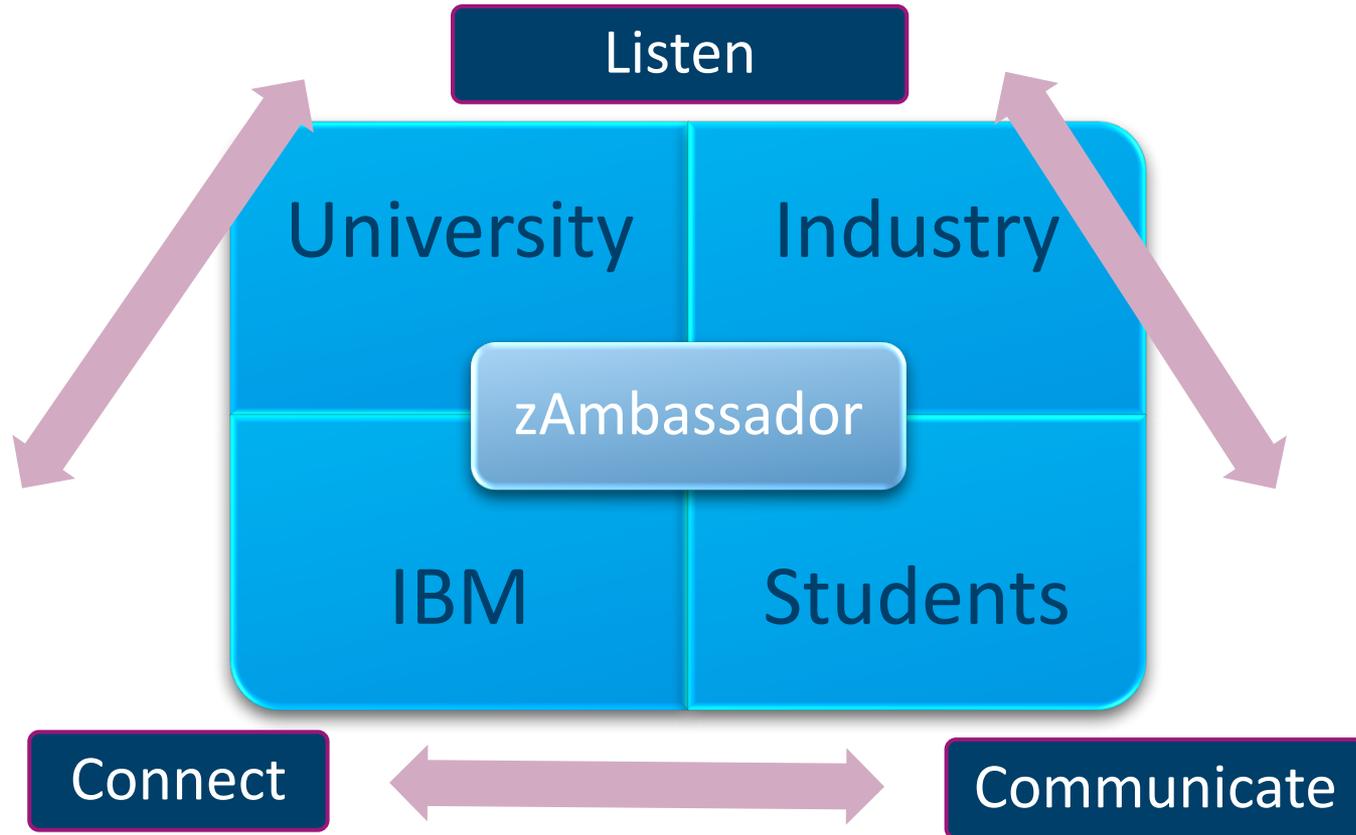

IBM Champions

IBM CHAMPION

noun \ 'champ-pē-ən \
They're experts. They're leaders.

Role of the z University Ambassador

Listen

University

Industry

zAmbassador

IBM

Students

Connect

Communicate

Role of the z University Ambassador

- **Minimum requirements**
  - **Contact faculty once or twice each semester**
  - **Share zAI emails and information**
  - **Report the status of the school to zAI at least once a year**
  - **Inform zAI of concerns or issues as they occur**
  - **** estimated time commitment - 5 hours per year**
- **The best ambassadors also**
  - **Organize a client roundtable**
  - **Visit the campus a couple of times a semester**
  - **Form a trusted relationship with the faculty**
  - **Organize a few events for students**
  - **** estimated time commitment – up to an hour a week**

Why be a z University Ambassador

- **Make a difference for the students**

- **Help your favorite university**

- **Grow the reputation of the mainframe**

- **Leadership opportunity**

- **Client perspective**

- **It's fun**

Individual Volunteer Opportunities

- **Guest lectures**
  - **In classroom or outside of classroom**
  - **University, College or High School**
  - **Mainframe, blockchain, machine learning and more**
- **Organize events**
  - **Master the Mainframe**
  - **Hackathon**
  - **Meetups**
  - **Whatever you can dream up**

Contact us

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