

Summer Internship 2021

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What is my main focus for the summer?

Application Health Scoring Team

- R - data analysis
- CASTH scanning/Jenkins tasks - QA

💡 My main project in the application health scoring team involves data analysis in R and some Excel work. As a newly declared data science major, I think it is important for me to gain some practical experience doing real world data analysis and I am eager to see how different it'll be compared to what I am used to through coursework. In my introductory data science and stats classes thus far, I have had it very easy. Always given cleaned data, nicely formatted Jupyter notebooks, and clear expectations. I am ready to break this mold and dive into the nitty gritty details of being a data scientist/analyst. I hope I can make some interesting observations that not only make me a better analyst, but also help the team in some way.

★ My very first Jira Story: As an AHS product, I would like to understand of common trends related to bad data as it pertains to AppOne source.

- I analyzed an AppOne information populated spreadsheet to find inconsistencies in AppOne application repository URLs utilizing RStudio
 - Inconsistencies in the URL include for example extra white spaces, added html references, and more
 - In R, I utilized the stringsr, and dplyr package. I also generated the report linked below using R Markdown. Additionally, I learned important data analysis concepts on joins and merges
 - Find my detailed notes and reports below:



-- A few weeks into this analysis, I realized why most people say the majority of the work in data science is data cleanup. I have had to go back countless times to Rob in order to show him another inconsistency found in the data and he has had to spend quite a few hours walking me through how to clean it up. This has been a valuable insight though and I even learned how to use the filter tool in Excel because of it. I appreciate the long hours Rob spent walking me through these processes.

-- I was also given the task of helping start builds on Jenkins for the CASTH team as well as logging the outputs from the respective scans. I learned a lot from this especially as to how people work together remotely and in different time zones, how exactly Jenkins works and should be navigated, as well as learning to read through logs and finding specific errors. I realized I actually really enjoyed the sort of repetitive process and found it quite a fun task to take on. Find my contributions here: [2021 Q2 - EA - Enterprise Architecture - DOE Confluence \(wellsfargo.net\)](#)

-- Another aspect I worked on for CASTH is the following document: [Application Registration \(Creation\) in CAST Highlight - EA - Enterprise Architecture - DOE Confluence \(wellsfargo.net\)](#)

What have I learned?

Intern group project

- Wells Fargo is decentralized and disconnected to many new interns and employees
- It is difficult to find and make connections across LOBs
- A few of my fellow interns and I proposed the creation of "Stagecoach Connections"
 - a live interactive diagram that maps out all the ways in which teams at Wells are interconnected
- Builds off the very one dimensional and flat structure of Team-Member Lookup with the goal to make the entire process dynamic, interactive, and user friendly

For this project, I got exposure to Adobe XD, Tableau (even though we didn't end up using it), Excel, Python, Jupyter Notebook, and networking across the various LOBs's

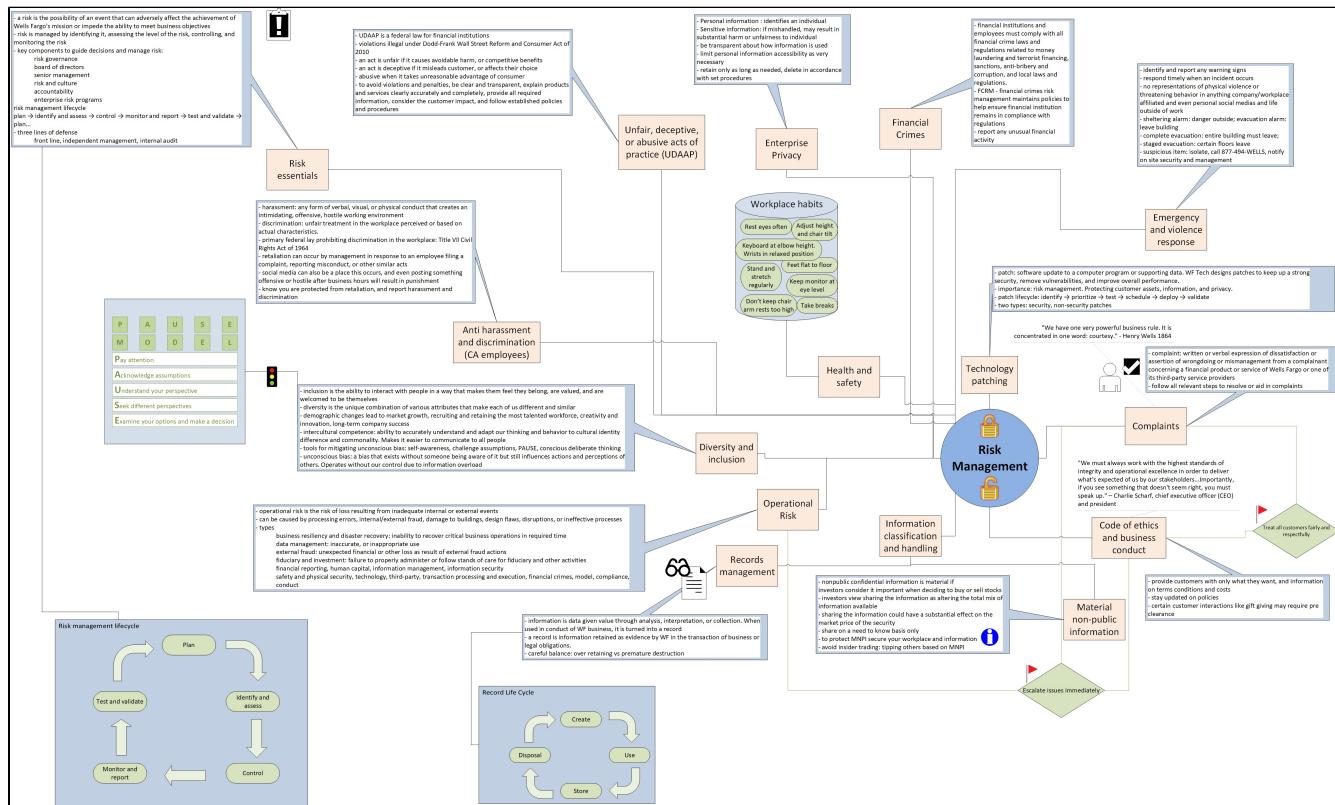
Here is a walk through of my Adobe XD prototype: [wf prototype \(adobe.com\)](#)

- this prototype and design is something I am most proud of in the project because it is something I independently worked on and found it really fun to choose WF colors that go well, design the process and make those links that make the design so much more interactive and real
 - Brand Central was a great asset that I utilized when designing: [Brand Central - Home \(wellsfargobc.com\)](#)
- Here is a pdf of the prototype and our presentation:



Trainings

Key takeaway: the importance of risk management aligned with the majority of training topics. Relations and information below (click diagram for better resolution and zoom capability):



Ted Talks

*Expand wireframe by clicking the square icon on the right of the visual for tab switching functionality



How We'll Earn Money in the Future Without Jobs

- Martin Ford

This Ted Talk discussed the idea of a universal basic income as machine learning and artificial intelligence continue to take over more and more jobs. However, Ford also discusses that such revolutions have occurred in the past and humans are resilient and find other jobs. However with the rising industry of automated jobs, there may be higher levels of inequality and thus a universal basic income can be a better way to build an economy that works for every level of society.

I personally don't think automation will lead to an unequal society. Even though machine learning and artificial intelligence may cause another revolution, similar to say the industrial revolution, this does not mean humans will run out of jobs. Moreoever, as Ford himself has said, the flexibility of humans will allow us to learn how to oversee these machines and manage them even without the tech backgrounds currently expected due to the beauty of abstraction. I don't think a universal basic income would work because I expect to see much more inequality and unfair practices in the higher ups with this ideal. It sounds far too dystopian.

Life Lessons from the Cockpit - Frank Van Buren

A wonderful book written by a wonderful person I feel so lucky I had the chance to hear from (Find notes from Frank's speech in the pdp table)

All the advice Frank provides based on real stories and experiences he has gone through are so impactful and I will definitely continue coming back to this book just as motivation and also to remind myself that it is always okay to make mistakes - taking accountability for them is the most important part.

The best way to talk about how great the advice in this book is would be to quote it itself:

"Opportunity is often camouflaged, and it rarely presents itself in an ideal manner. Look for the crack in the door, and when you see it, boldly and courageously run through it." - page 13

"Whenever you are frustrated in life and run out of ideas, go get a fresh perspective from another source." - page 58

"In order to live a more meaningful life, make a difference in your community by finding a way to use your talents to help others who are less fortunate. It is more rewarding than money, power or prestige." - page 63

"It is critical to seek advice from the best in your field, but never outsource the final decision to anyone who doesn't bear a similar risk as you..... think deeply about the pros and cons, and then make your call. It's your life." - page 79

Technology Primers

Primer	Notes	Insight
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Digital	<p><u>Introduction to digital transformation</u></p> <p>latest disruption to our existence: digital transformation</p> <p>culture, practices, processes of internet era in response to peoples' raised expectations</p> <p><u>10 tips for starting your digital transformation</u></p> <ol style="list-style-type: none"> 1. clear strategy and vision <ol style="list-style-type: none"> a. evaluate roadblocks and opportunities 2. ensure top to bottom buy in <ol style="list-style-type: none"> a. commit fully and shift to a digital mindset 3. enable company wide communication <ol style="list-style-type: none"> a. leaders, tech team, staff all need to be able to share ideas, solve problems, and collaborate 4. start out with a focus on smaller short term projects 5. be human-centric 6. beware the barriers to progress <ol style="list-style-type: none"> a. avoid outdated inflexible systems b. internal politics 7. ensure you have the talent <ol style="list-style-type: none"> a. necessary skillsets 8. avoid marginal thinking <ol style="list-style-type: none"> a. cost of investing vs not b. sometimes it is worth it to invest long term 9. enable rapid customer feedback loops <ol style="list-style-type: none"> a. immediate feedback 10. remember digital transformation is a continuous process <ol style="list-style-type: none"> a. constantly review progress and assess risks <p><u>Delivering a fantastic customer experience in the digital age</u></p> <p>Power-shift to customers</p> <p>stand out by delivering an outstanding customer experience by</p> <ol style="list-style-type: none"> 1. differentiate your messaging <ol style="list-style-type: none"> a. make marketing personal b. variant mailers rather than mass mailers based on journeys and profiles c. leverage machine learning and data to your advantage 2. dig deeper into the data <ol style="list-style-type: none"> a. don't drown, dive b. context and story regarding a certain data point to evaluate customer needs based on this implicit feedback from the data 3. use technology to solve problems <ol style="list-style-type: none"> a. keep tech simple and user friendly b. focus on empathy 4. structure everything around people 5. focus on what matters <ol style="list-style-type: none"> a. shift from doing more to doing less, better b. automation, simplicity 6. rethink the system <ol style="list-style-type: none"> a. make things people want rather than making people want things 	<p>The digital revolution has changed the world and all organizations from single individuals to large companies need to adapt and keep up a customer focus.</p>
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Agile	<p><u>Agile: a set of principles for building software.</u></p> <ol style="list-style-type: none"> 1. Adaptable <ul style="list-style-type: none"> a. satisfy ever changing customer needs b. positively welcome these changes c. optimize the entire process 2. Rapid <ul style="list-style-type: none"> a. deliver something often b. simplicity 3. Collaborative 4. Team-Oriented <ul style="list-style-type: none"> a. business/dev people work together daily <ul style="list-style-type: none"> i. have your business people sit with the tech people b. face-to-face conversations c. support and trust the team d. zero overload 5. Quality focused <ul style="list-style-type: none"> a. technical excellence b. good design <p>SCRUM: provides structure for applying agile principles</p> <p>team ceremonies</p> <p>SCRUM team is small: 5-9 people</p> <ul style="list-style-type: none"> • product owner <ul style="list-style-type: none"> • know the customer • write user stories <ul style="list-style-type: none"> • describing what the product needs to do from customer POV • as a ... I want to ... so that • own value of product • scrum master <ul style="list-style-type: none"> • facilitate SCRUM • protect team • clear blockers • owns efficiency • team itself <ul style="list-style-type: none"> • estimate work • build stories • escalate blockers • own quality of product <p>Scrum ceremony</p> <ul style="list-style-type: none"> • backlog grooming • sprint <ul style="list-style-type: none"> • ensure story point estimates • daily standups • sprint review <ul style="list-style-type: none"> • with stakeholders • sprint retrospective <ul style="list-style-type: none"> • evaluate how to improve the next sprint • goal: increase "velocity" how many story points are completed per sprint 	<p>Agile is a framework implemented by SCRUM with the overarching goal of efficiency and product development through a customer focus.</p> <p>Structure work present evaluate</p>
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Data	<p><u>What do we do with all this big data?: Susan Etlinger</u></p> <ul style="list-style-type: none"> • not just passive consumers of data and technology • we make meaning <p>Ask hard questions to move to understand data in the world.</p> <p>All data requires context.</p> <p>Language is created by people and people are messy and complex. So how do we deal with this when trying to analyze this data in context.</p> <p>Data does not create meaning itself. We have a responsibility to spend more time focusing on our critical thinking skills to avoid making bad decisions based on uninterpreted data.</p> <p>Need to actually spend more time on the humanities: sociology, ethics, languages.</p> <p><u>What you need to know about big data and data analytics</u></p> <p>data</p> <ol style="list-style-type: none"> 1. collection of facts and stats 2. quantities, characters, symbols that are stored, recorded, and transmitted <p>Big data refers to the traces we leave and how organizations utilize this</p> <p>Big data</p> <ol style="list-style-type: none"> 1. volume 2. velocity 3. variety <p>What makes big data powerful is what is done with it</p> <ul style="list-style-type: none"> • don't get lost in the data, have a plan and strategy in place to handle it • small iterative circles are better than larger goals <p>Leverage AI to turn big data into a valuable business asset</p> <ul style="list-style-type: none"> • go from analysis to prediction <p>data is the new oil</p> <ul style="list-style-type: none"> • only valuable if it is properly refined 	Data is only as valuable as you make it.
Cyber Security	<p><u>Recognize Phishing Attempts</u></p> <ul style="list-style-type: none"> • Spear phishing - fastest growing security threat <ul style="list-style-type: none"> • email scams • phishing signs: spelling or grammar errors, message seems to come from trusted source, message requires urgent action, use of fake website • don't take any action, let actual company know <p><u>Information Security Essentials</u></p> <ul style="list-style-type: none"> • Confidentiality, integrity, availability (CIA triad) <ul style="list-style-type: none"> • confidentiality: preventing unauthorized disclosure of nonpublic information • integrity: preventing unauthorized modification of systems and information. • availability: preventing disruption of service and productivity • risk management steps include planning, identifying and assessing, controlling and mitigating, monitoring and reporting, and testing and validation <p><u>Introduction to Cyber Scams</u></p>	Be a risk manager at all times. Keep all information secured and double check everything.

- phishing isn't just in emails anymore. You can get scam voice and text messages
- **Computer virus:** disruptive program installed without knowledge and can be destructive
- **Trojan:** software program disguised as a file like an antivirus program that allows third parties to access computer and information
- **Spyware:** secretly gathers information about a user's computer activity
- **Ransomware:** malware downloaded to computer and blocks access to system until victim pays a ransom
- spread through contaminated websites, clicking suspicious links, downloading infected files, inserting infected USB
- Signs:
 - unwanted ads, spam emails, disabled antivirus, slower speeds

Information Classification Matrix Overview

- interacting with various documents and emails with different information classifications
- Matrix is a reference tool available to all employees
- information: **public, internal use, confidential, restricted**
 - most are on a business need to know basis
- lowest risk level: public information – unrestricted use beyond the company
 - examples: business card, marketing flyers, website on information
- internal use is also low risk level
- confidential - medium to high risk level
 - limited to specific groups
 - examples: social security, account number, check images
- highest risk level: restricted – passwords, pin numbers, credit card security codes
- personal information vs sensitive consumer information
 - may require extra protection for privacy protection
- confidential supervisory information (CSI) - non-public information owned by primary federal banking regulators that is in Wells Fargo's possession
 - written or oral supervisory correspondence
 - confidential/restricted

What team members should know about information security

- follow all rules and be aware
- **be a risk manager**
- limit activity to legitimate business purposes on the internet
- don't independently download software
- no online gambling
- be aware of phishing
 - emails, phone calls, links, software
- lock workstation and mobile devices
- keep devices current to minimize vulnerability
- do not disclose passwords
- send minimal necessary information to correct recipients only
- identify compromised data incidents

Review, Assess, and Protect

- risk management
- ensure information is secure by understanding information classification and controls
- review information content thoroughly
- assess content against information classification matrix through Teamworks
- protect information through encryption or avoiding unneeded sensitive information

Machine Learning

What you need to know about AI and machine learning

Machine learning has been integrated in all aspects of our lives already, but as we continue to develop the field further, we must make sure to design inclusive and accessible solutions.

- AI is a helpful tool
- AI is an intelligence demonstrated by a machine that leads to a solution to a problem or makes a decision
- ML and deep learning are varying degrees of AI
- AI began in 1970s and is accelerating even today
- logic programming, Bayesian systems, expert systems, semantic knowledge bases, deep learning
- signs point to optimal results when human and machine intelligence is combined
- Pareto 80/20 rule to take on small changes for biggest impact

Big data is better data - Kenneth Cukier

- more data allows us to see new and better findings
- effective use of data can help solve many problems
- from static data to fluid dynamic data
- culmination of data is because we are collecting information we never have before
- Data is fundamental in machine learning to make algorithms that function at the high level that we know them to (self driving cars, Google Translate, Siri, etc.)
- in the big data age the challenge is safe guarding free will, moral choice, agency rather than simply privacy
- big data and algorithms will also challenge white collar knowledge work
- it is not necessarily true technology creates jobs. There are some jobs that are lost and never come back
- be the master of this technology, not its servant
- get better at handling all the data that is collected

How I'm fighting bias in algorithms - Joy Buolamwini

- algorithmic bias results in unfairness and spreads biases at a massive scale and rapid pace leading to more discriminatory practices
- full spectrum inclusion is very important
- example: facial recognition racial biases
- Book recommendation: *Weapons of Math Destruction* by Cathy O'Neil
- inclusivity in code and coding practices
 - WHO codes matters
 - HOW we code matters
 - WHY we code matters

Don't fear intelligent machines. Work with them - Garry Kasparov

- (former world chess champion)
 - story of going from beating machines to machines beating him in chess
- machine triumph however is that they are created by humans - it is a human triumph
- Can machines ever be truly intelligent?
- With IBM deep blue no way to measure body language, eye language
- even if a machine beat the game, humans still continue to play chess
- learn to face the fears in the face of technology to improve humanity
- need better interfaces to coach machines towards useful intelligence
- humans and machine isn't a future, its the present
- the idea that machines will soon replace the so-called white collar jobs is actually good news. It means that it will eventually reach all professions a true revolution
- human empathy and emotion is missing in machines

What AI is - and Isn't - Sebastian Thrun and Chris Anderson

- modern phone has more than 12 million lines of code behind it
- ML looks at data instead, gets rid of the need for engineers to know everything about what they are coding up look at large amounts of data even humans couldn't fully finish looking at

-- join the group below!

- Analytics Community of Practice Machine Learning Interest Group on Team Moments

Artificial intelligence enterprise solutions

- 4d framework
 - data, dollars, deployability, differentiation
- use case lifestyle
 - discovery, ingestion, model development and deployment, usual business

Artificial Intelligence	<p><u>Artificial Intelligence Develop You Course</u></p> <ul style="list-style-type: none"> • AI doesn't have to take over jobs completely, but can help take over repetitive tiring tasks and lead to more learning and job satisfaction <p><u>How to get empowered, not overpowered, by AI : Max Tegmark</u></p> <ul style="list-style-type: none"> • technology we continue to develop has the opportunity to help life flourish for billions of years not just on Earth but all of cosmos • artificial general intelligence and what this means for the role of humans • be conscious about steering towards an AI future that help humans flourish not flounder • avoid an arms race of lethal autonomous weapons • think through what things could go wrong with growth of AI and be proactive to avoid them • ensure AI generated wealth makes everyone better off • prioritize and invest in AI safety research • friendly AI and freedom of choice <p><u>How AI can enhance our memory, work and social lives: Tom Gruber</u></p> <ul style="list-style-type: none"> • taking on a humanistic AI view • Tom helped create SIRI <ul style="list-style-type: none"> • designed to help humans regardless of abilities • utilizing AI as a catalyst to help humans beyond currently possible • how smart can our machines make us? • human memory is flawed but AI can remember so many aspects of our own lives <p><u>How AI can bring on a second Industrial Revolution: Kevin Kelly</u></p> <ul style="list-style-type: none"> • tendency to make things smarter: AI • consciousness-free machines <ul style="list-style-type: none"> • making different 'types' of thinking • formula for next 10k startup: take a process and add AI <p><u>Can we build AI without losing control over it?: Sam Harris</u></p> <ul style="list-style-type: none"> • science fiction has taken an entertainment stand making it difficult to see the true dangers behind it • concerns of one day building machines that unconsciously treat us with disregard • no matter the rate of progress, we will eventually build general intelligence into machines and keep going towards this goal • the machine mind is so much more powerful than our own minds • if machines will be so much more powerful and all-knowing, we have to realize we are building a "God" and we must make sure it is a "God" we can live with <p><u>How computers are learning to be creative : Blaise Agüera y Arcas</u></p> <ul style="list-style-type: none"> • utilizing machine learning and mathematics to create graphics and have no control over it - machine does this itself <p><u>What we're learning from machine learning</u></p> <ul style="list-style-type: none"> • even Wells is utilizing AI in very strategic ways across the company with a notable example being the fraud detection algorithm for purchases where a card wasn't directly used 	AI is a great tool that has many uses, but we need to be careful as to the type of progress we continue to make.
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Robotics Automation	<p><u>Will automation take away all our jobs?: David Autor</u></p> <ul style="list-style-type: none"> historically greatest inventions designed to replace human labor fraction of adults in labor market is higher now than before O-ring principle: type of work we do never get enough principle: how many jobs/greed automation creates wealth, not destroying jobs it is important to invest in education to ensure humans are able to keep growing as needed and have jobs available to them <p><u>Introduction to RPA</u></p> <ul style="list-style-type: none"> enterprise robotic and intelligent automation process automations where computer software a 'robot' drives existing enterprise applications in the same way that a user does, creating a digital user and eventually a digital workforce goal: allow for end to end operations in business processes attended RPA is user triggered <ul style="list-style-type: none"> runs on user local machine RPA unattended is agent assisted <ul style="list-style-type: none"> run virtually on a global desktop 	A useful future for many tasks.
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PDP presentations and talks

Title	Notes
Remote team member community practice: working from home best practices and resources	<p>Wendy Thompson & Shelly Michelle Masteller</p> <p>Structuring your day effectively:</p> <ol style="list-style-type: none"> get dressed and ready schedule coffee breaks and lunch breaks maintain regular work hours create a consistent daily routine dedicate a workspace end day with a relaxing routine <p>Maintaining emotional balance</p> <ul style="list-style-type: none"> communicate all expectations with those you share a home with stay virtually connected with colleagues set goals for the day and week remain flexible with yourself and the team set up daily virtual coffee chats share issues with your manager open team meetings by sharing personal accomplishments or challenges <p>When it comes to Covid-19 related anxiety make sure to take media breaks, focus on facts, find self care activities, help others, and practice mindfulness.</p> <p>Join the Team Moments remote team member community of practice</p>
Health and wellbeing resources and events with Colleen Fautus - Finding balance through work-life	<p>It is important to reflect on the year you have had and create new intentions to feel grounded and centered</p> <p>"If you own this story you get to write the ending" - Brene Brown</p> <p>Utilize a time management matrix to prioritize tasks</p> <p>Learn how to say "no" to protect your boundaries and time and energy</p> <p>Be mindful of the commitments you make and what activities take up your day</p>

<p>Technology speaker series head of technology India and Philippines - Sajid Ahmed</p>	<p>Frequency of technology turnover means continuing to stay up to date</p> <p>Next five years of our life</p> <ul style="list-style-type: none"> • very critical time to manage your career • continue to evaluate progress on goals every quarter • get a mentor • be the technical SME (subject matter expert) • develop networks • challenge status quo • let the work choose you <ul style="list-style-type: none"> • there is more to tech than ML and AI so be open to fields that are less popular • the work given to you will always seem bad, but what you make out of it is what matters <p>Next 10 years</p> <ul style="list-style-type: none"> • become a leader • connect the dots of understanding what your business does and how you fit into that role • build business relationships • understand systems not applications • be the risk manager • focus on details • become a mentor <p>10+ years</p> <ul style="list-style-type: none"> • embrace change and drive these changes • hire people smarter than you • remember that revenue drives companies <p>Life lessons</p> <ul style="list-style-type: none"> • take risks early on • chase opportunities not titles • be a relevant part of the community
<p>Innovations in banking - Jason Strle</p>	<p>Currently there is a 4th industrial revolution occurring</p> <ul style="list-style-type: none"> • data and its utilization in the physical world <p>Scope of technology at Wells</p> <ul style="list-style-type: none"> • 40,000 skilled technologists around the world • supported more than 10.3 billion desktop and mobile logins in 2020 • integral to functions of the economy • huge backend framework for the workings of the US and global economy • 163,753 databases • storing 51.7 petabytes of data <p>Customer focus</p> <p>Market Demands</p> <p>Competitors</p> <p>Transformational technology focuses</p> <ul style="list-style-type: none"> • banking as a service • digitization and intelligent automation • distributed ledger technology • data and AI driven insights <p>Digitization and intelligent automation</p> <ul style="list-style-type: none"> • paycheck protection program: enabled by robotic process automation, optical character recognition and E-signature • providing 100% self-service when our customer wants or needs it • new capabilities like chat, voice assistant, single on-going conversation among customer journey <p>WF technology filed 277 patent applications in 2020</p>
<p>Wells Fargo history - Andy Anderson</p>	<p>**We were the last intern class to hear Andy Anderson speak as he is retiring and it was an absolute honor!</p> <p>"always, always, always do the right thing" - Charlie Scharf</p>

- we are the dependable and trustworthy heirs to 7 generations of WF employees serving tens of millions of customers. We are one of the most storied and recognized names in American history
- Through the test of time, we stand for integrity, trust, responsibility, security, courtesy, respect, diversity, equity, inclusion, justice, hard work and most of all – “doing the right thing” for the benefit of customers communities and shareholders and each other

The best of Who We Are is reflected in the history and service culture of seven generations of Wells Fargo employees who helped build thousands of communities across the map of America

Combine banking with a transportation and communications network for the rapid, secure movement of money, information and valuable goods

- Henry Wells 1805-1878
- William G Fargo 1818-1881
- Wells, Fargo & company
- Banking and express ‘joint stock company’ founded at No.16 Wall Street, NYC, March 18, 1852 initially capitalized at \$300,000

There is one very powerful business rule. Concentrated in the word – courtesy

- Henry wells when asked by a young person what it takes to succeed in business 1864. Preserved in gold letters at entrance to every WF community bank branch

WF transported gold to US mints for conversion into US gold dollars the foundation of the monetary and payments system throughout the US

A ‘full value’ proposition

- Checks
- Good as gold
- Redeemable at 100 cents on the dollar in gold at WF offices
- Preserved value and provided convenience and security in form of signature based accounting system for customers who couldn’t leave their homes or business

Our wisdom and youth heritage: values and work ethic

- All my letters on business are to be written always five or six each night and the same number during the day. The gold dust...is to be cleaned, weighed, sealed, and packed, ready to be forwarded in the morning. My books balanced, letters to be sorted...and bundled for the river messenger who leaves at daylight. This must be done with half a dozen things before I go to sleep. I have no trouble owing to the care of the treasure which is placed on this office. Were it not for this feeling of responsibility and trust, I would be light-hearted as a bird.

- Letter from 21 year old WF agent John Q Jackson Auburn, CA

Women who build WF

- Cassie Hill: widow with 5 children was the agent in rough and tumble railroad town of Roseville, Ca for 25 years. Lived to be 102. WF was among the earliest and largest employers of women in American west

African American heritage: George Monroe

- Former slave from Georgia who was a stagecoach driver in CA took president Ulysses S Grant into Yosemite valley.

Hispanic Heritage

- Jose Guadalupe estudillo
- Renowned civic leader WF in San Diego 1870s
- Cross border business with Mexico
- Later served as California state treasurer

Wellsfargohistory.com

Our Chinese history

- California gold rush days

LGBTQ Heritage

- SF lesbian/gay freedom day parade 1992-3

	<ul style="list-style-type: none"> - Sense of justice <p>Elders heritage</p> <p>"the most polite and courteous treatment of all customers is insisted upon. Proper respect must be shown to all – let them be men, women, children, rich or poor, white or black" – 1882</p> <p>"service is the very backbone of our business. We have very little else to sell. Our merchandise is courtesy, willingness, and human ability" 1917</p> <p>WF network of 10k offices on main streets across America taken over by govt during WW1 to 'facilitate movement of wartime materials'</p> <p>Rebuilding WF franchise through mergers and tech – online banking</p> <ul style="list-style-type: none"> - Connected merger purchase acquisitions of small independent financial institutions <p>Wells Fargo family and business history center</p> <ul style="list-style-type: none"> - Gift to future generations of your family - Archive of historical documents and storytelling about values and lessons learned from a family's history that point the way to planning the future
Artificial intelligence and machine learning - Agus Sudjianto	<p>Uses at Wells</p> <ul style="list-style-type: none"> • model risk • model interpretability and complexity • credit scoring • fraud prevention • trading • collections optimization • credit underwriting <p>Making dynamic and flexible models that survive adverse environments</p>
Kurt Lieber chief information security officer	<p>Do the work you enjoy</p> <ul style="list-style-type: none"> • you will work for a long time, don't get stuck doing something you hate <p>Work for someone you respect</p> <ul style="list-style-type: none"> • not necessarily someone you like • take roles because of the company, leave roles because of the leader <p>Keep things in perspective</p> <ul style="list-style-type: none"> • life goes on and a job isn't the main thing <p>Be a generalist and understand different aspects of your field</p> <p>Especially in security, a richer understanding of the whole environment makes a better security professional</p> <p>A critical inflection point: going from a technical to a leadership role</p> <ul style="list-style-type: none"> • your skills and strengths need to change • networking and people skills <p>**use a password manager always</p>

State of the economy: Shannon Seery and Azhar Iqbal

www.wellsfargo.com/com/insights/economics

- provide forecasts of key macroeconomic variables
- conduct client presentations

Structural issues: this time different?

- Is this time different for the economic recovery?
- Is this the end of the weaker-recovery-trend?

US Outlook

Health crisis covid 19

- Pace of vaccinations has peaked at this point. Medicine is starting to take as new cases drop
- The fiscal response has been substantial this cycle, with much of the support going directly to households and businesses
 - 25% of GDP

Growth expected to strengthen rapidly, output back to pre-covid levels by mid year and output gap closed by end of year

Inventories have been depleted and wait times for inputs have lengthened tremendously

Inventory relative to sales plummeted to all time lows

Pricing pressures à inflation

Inflation is rising at the fastest pace in more than a decade

Areas at the center of reopening and supply chain issues have been the major drivers of recent inflation

The labor supply has contracted significantly since the pandemic, leading to hiring challenges and wage pressures

Employee activation and impact today with Lynne Walters	<p>The relationships and connections you make can help you reach for jobs you actually want</p> <p>How can WF employees get involved?</p> <ul style="list-style-type: none"> - Learn about WF sustainability commitment and ways the company impacts your community - Serve at favorite charity or through employee groups and qualify for community care grants - Give to favorite eligible charity - Take action on impact today and community care portal - Join conversations on team moments - 16 hours of paid volunteer time every year <p>How to get involved: learn</p> <ul style="list-style-type: none"> - Learn about serving, giving, and sustainability programs <ul style="list-style-type: none"> • Team works sites • Impact today - Learn about causes and issues that inform enterprise wide philanthropic and sustainability priorities <ul style="list-style-type: none"> • Equitable giving tips, black history month regional charity resources, WF sustainability commitment 2030 <p>Learn more about service and giving programs on Team works</p> <ul style="list-style-type: none"> - Primary source for questions - volunteerinfo@wellsfargo.com - wfcommunitycare@wellsfargo.com <p>year round volunteer service options</p> <ul style="list-style-type: none"> - Employees have the opportunity to connect and give back through innovative and inclusive service options that align with personal passions as well as social impact and sustainability focus areas - Individual, virtual, group, skills based, board service <p>Random acts of kindness à way to engage in community</p> <p>Signature volunteer programs</p> <ul style="list-style-type: none"> - Building houses? <p>Volunteer chapters, employee resource networks, green teams</p> <p>Team Moments community</p> <ul style="list-style-type: none"> - Employee service and giving - Wells Fargo green team <p>Impact map</p> <p>https://welcome.wf.com/impact/</p>
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Ravi Radhakrishnan	<p>CIO and head of commercial corporate and investment banking technology</p> <ul style="list-style-type: none"> - Based in SF California <p>Involved in</p> <ul style="list-style-type: none"> - AI, quantum computing advanced engineering - Racial and ethnic diverse work stream - WF India tech committee lead board member - WF patent executive sponsor - Represent WF as founding member with Stanford HAI <p>Exposed to many cultures</p> <p>Worked extensively in global operating models</p> <p>Key tech trends driving future of banking</p> <ul style="list-style-type: none"> - Seamless client experience - Meet clients in their own workflow <p>Banking as a service</p> <ul style="list-style-type: none"> - WF foreign exchange API - Api driven transaction banking <p>Largest global companies by market cap</p> <p>Advice</p> <ul style="list-style-type: none"> - Show initiative by going beyond immediate definition of your role - View change as an opportunity to do things differently, enhance yourself - Be resilient and have a positive mindset - Understand the bigger picture and ask why - Know enough of the details to be effective and be solutions-focused - Take time to reflect on and learn from failure - Strive for an effective work/life balance - Drive inclusive thinking - Communicate well – calibrate for different audiences, connect dots, influence outcomes
Exploring diversity dimensions: Livia Konkel, Drinal Foster	<p>Diversity, equity and inclusion exploring diversity dimensions</p> <p>DE&I</p> <ul style="list-style-type: none"> - Not in human resources, a separate function - Leader reports directly to CEO - Expanding diversity at all levels of the company <p>Diversity is the unique combination of various dimensions</p> <ul style="list-style-type: none"> - Reference diversity wheel <p>Equity is fair treatment, access, opportunity, and advancement for all people while striving to identify barriers for full participation of groups</p> <p>Inclusion is ability to interact with people in a way that makes them feel belonged and welcome to be themselves</p> <p>Framework focused on driving outcomes in three key areas</p>

1. Workforce diversity equity and inclusion outcomes
 - a. Recruitment development engagement retention
 - b. Marketplace outcomes
 - i. Growing market share in markets and suppliers
 - ii. Advocacy activity
 1. Supporting external relationships and reputation building efforts as well as personal accountability for diversity, equity, and inclusion advocacy

Business case information

- As one of the world's great companies, we must continue leading the way in terms of diversity and inclusion
 - Reach new markets
 - Satisfy all customer needs
 - Revenue growth
 - Employees feel valued and help company succeed
 - People more engaged at companies with diverse and inclusive cultures
- Companies with diverse cultures outperform peers
- Must be as diverse as the customers and communities we serve – and being more inclusive allows us to deliver more value

David Pruessner

Get involved

- Visit DEI website
- Participate in DEI chats
- Create action plan
- Build DEI skills
- Join employee resource networking

Employee resource network

- Support professional network
- Chat with senior leaders
- Engage community through volunteering opportunities
- Gain market insights
- Serve as a change agent for embedding inclusive practices into WF day-to-day operations

DEI learnings

- DI 1 foundations
- DI 2 understanding unconscious bias
- DI3 appreciating difference

Advanced learning offerings

- Unconscious bias and inclusion
- Big decision
- Advanced diversity and inclusion
- Gender acumen matters

Diversity dimensions wheel

Primary- as 'inner', born with these dimensions

Secondary – 'middle' dimensions have more control and may change overtime. Created through life experiences upbringing and opportunities

Outer – 'corporate' dimensions are business related helping us to be aware of how we work within our lines of business and provide outstanding service

Thriving in times of change with WF employee assistance consultant Tracy Watkins

- Challenges today
 - Work is increasingly voluminous and demanding
 - Technology can be chronic
 - Information overload
 - Day to day stressors: financial, family, health
 - Struggling with return to office concerns and other pandemic related unknowns

Common emotions when undergoing change

- Worry or fear
- Stress
- Overwhelm
- Grief and loss
- Sadness
- Uncertainty
- Frustration
- Confusion about change
- Difficult focusing and remaining engaged

Pressure performance curve

As pressure increases, growth will grow but decrease significantly during burnout and emotional exhaustion

Energy management

- Increasing productivity and expanding capacity by understanding daily energy cycles
- Sustain energy, achieve peak performance, gain greater satisfaction for work and life
- Energy management further enhanced with self-care rituals and mental health counseling techniques

Biological, psychological, cognitive, mental

Resource 1: biological/physical

- Physical strength, stamina, strong immune system
- Prioritize 7-8 hours of sleep nightly
- Practice positive nutritional habits
- Exercise regularly
- Respect ultradian cycle = physical need for breaks

Resource 2: psychological (emotional/social)

- Positive emotions, empathy, optimism, joy, humor
- monitor emotions
- Awareness on triggers
- Regulate emotions using controlled pattern breathing
- Create internal scripts in response to conflict or difficult stress-inducing situations
- Express appreciation, gratitude journal
- Connect with others and incorporate human into work and life

Resource 3: cognitive (mental)

- Focus, memory, problem solving, strategizing, creative thinking
- Limit multitasking
- Harness technology
- Reduce interruptions/distractions
- Practice mindfulness

Resource 4: spiritual (human spirit)

- Connecting behavior with values, meaning, enhancing lives of others
- Identify core values and align them with your life
- Demonstrate compassion daily, commit random acts of kindness
- Make time for activities that feed the soul

Energy enhancing self-care plan

- Write down 1-3 energy enhancing/self-care behaviors
- Make written commit to practice behaviors chosen
- Identify accountability partner
- Give yourself patience and grace

"It's never too late to be who you might have been" – George Eliot

Stop doing

- Using phone so much
- Staying up late
- Sitting all day at work

Start doing

- Keeping up with gym routine
- Reading or writing daily
- Sleeping early enough to get minimum 8 hours rest everyday

Give yourself 6 weeks to fully develop a full habit

EAC can be reached by calling 18883270027 or 18774793557, option 4

Professional development sweet spot and CPO model with Jimmy Phillips

Tech service management

Data owners, ensuring completeness and accuracy for data information store

Focus on your strengths

- How do you develop a strength
 - Competency is something you are good at, can focus on your development in this area to make it profound /extraordinary
- What strengths should you develop?
 - Take a self-assessment to determine the strengths where you should focus on your development

The 'how' matters

- Character, personal capability, focus on results, leading change, interpersonal skills

Identifying development priorities

- Competence, passion, organizational needs
- Find the extraordinary performance 'sweet spot'
- When competence, passion, and organizational need converge

Competency self-assessment

Think about a time in your career when you were operating and performing at your best?

- What skills and strengths did you use?
- What was your engagement during that time?

Mixed development options

70% experience

- Projects, roles, team work, community involvement, stretch assignments, taking initiative

20% relationships and feedback

- Assessments, feedback from peers and leaders, mentoring, coaching

10% programs and courses

- Online training, classwork, immersion programs, onboarding, reading, workshops

Tracy Kerrins	<p>Joined in 2019</p> <p>BS industrial and operations engineering, University of Michigan</p> <p>Started in tech and coding</p> <p>Then consultancy</p> <p>Neurodiversity program pilot sponsor</p> <p>Women in technology group</p> <p>Grace hopper executive sponsor</p> <p>Month of action lead</p> <p>Wf tech diversity and inclusion council co chair</p> <p>COVID response</p> <p>Implementation of multiple HR tools</p> <ul style="list-style-type: none">- Service now live chat- New employee reporting data- Processes for tracking and making additional cash payments- Emergency response applications in service now <p>"some women fear the fire. Some women simply become it" RH Sin</p> <p>"luck favors the prepared!"</p>
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Frank Van Buren
CIB manager
director

- Life Lessons from the Cockpit
 - Opening up new chapters of life
 - You don't know when you are going to pass away, maximize every moment and do what is most important to you always
 - 21 years at WF - investment banker, bonds salesman, greatest sense of fulfillment when impacting lives of others in a positive way
- Decided by Jan 1 2019 he was going to give 30 speeches in public in the year with emphasis to share everything he's learned all the years of experience
- He has LinkedIn, Instagram, and YouTube
- Once you start moving, it's the momentum
- Opportunity is hidden
- What WF loves to see is people who demonstrate commitment
- Greatest lesson learned from mother, who is now 97
- Moved from Germany to US at 13 and lived in apartment at Wood Lake where buildings are wooden
 - Playing basketball and hears fire engines
 - His own building on fire
 - Standing there were mother, father, sister
 - His mom stayed calm and told him "everything is going to be okay" even though there were not much finances or another home to go to
 - Everyone was okay, no one hurt
 - **Find the good in every situation**
- Set the tone of your day and base line right at the beginning
- Early on, career pivots are based on what would benefit you – what can you get from that opportunity
- Best book on hr "How to win friends and influence people"
- Never really win an argument, not about winning but allowing other person to express their view even if it is wrong and then confidently articulate your view
 - Stop listen and put yourselves in the shoes of others
- Work hard in school get good college get good job and then just stuck in an orbit
- But growth comes in discomfort

Charlie Scharf	<p>29/2021 Charlie Scharf WF PDp</p> <ul style="list-style-type: none"> - Working jobs since 13 - Father was broker - Never did the same thing every summer - Learning what is possible and what is important to me - Opening eyes to opportunities - That exist - Read all the time - Coming into business: read the newspapers - 35 – CFO at smith and barney - Worked with Jamie Diamond for a long time – CEO of JP Morgan Chase <ul style="list-style-type: none"> • Was actually fired in 1998 • Not just a mentor, but a great boss - Finding people who care about your career and you as a person - Active cash card launch - Most respected financial institutions <ul style="list-style-type: none"> • Innovating products for customers and consumers of all sizes - Lead with mobile - Fintech competition - Not about hiring people just for diversity sake, but ensure you have a diverse interview pool and choose the best - The ups are never quite as high as you think they are and the downs are not as low as you think they are <ul style="list-style-type: none"> • Don't be so excitable • Moderate these emotional swings
Renee Liverpool	<p>She is in the bay area</p> <p>Masters in French and writing</p> <p>Joined WF in 2018</p> <p>Credit basics</p> <ul style="list-style-type: none"> - 30% rule à using less than 30% of your credit per month - Doing multiple payments - Never let credit debt increase more than 20% - Overspending credit money makes it hard to pay it back

Manish Kumar CIO wealth and investment management	<ul style="list-style-type: none"> - Previously JP Morgan Chase - Worked across 3 continents - Don't fall in love with the solution, fall in love with the problem <ul style="list-style-type: none"> • Stay true to the problem - In a managerial position, the most important thing to do is listen to others and let others speak up before you do - Younger employees: tend to be quick and take decisions too fast, but should focus on getting more data and value before making decisions <ul style="list-style-type: none"> • Analyze and assess along the way and be very transparent about when something is working or not working - Giving something simple to use is very powerful – intuitive, simple, available <ul style="list-style-type: none"> • Overload complexity doesn't really work - WF intuitive robo advisor account - The downfalls on local optimization
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Farewell ... For Now ...

Future interns and new employees: check out my intern onboarding guide here [Intern Onboarding Guide - EA - Enterprise Architecture - DOE Confluence \(wellsfargo.net\)](#)

Giving my sincerest thank you for this opportunity. To all those who have taken the time to talk to me, teach me, give me advice, and guide me, I am so grateful to have been able to meet you and benefit from your kindness. I've had a great deal of growth this summer and feel so much more confident about knowing that I also fit into this corporate tech world that once seemed so foreign and intimidating. I have learned that its not the name or reputation that makes a company great, its the people who work for it. I hope to stay connected to you all. Hopefully this isn't the end of a chapter, rather a prologue.

A final end with a special feature of my work from home desk setup 😊

