


```
In [2]: faculty_dict = {"William Nganje":{"Website":"https://www.ndsu.edu/agecon/faculty/
    "Areas of Specialization":"Risk management;
    "Bio":"NA"},
    "David Bullock": {"Website":"https://www.ndsu.edu/agecon/faculty
    "Areas of Specialization": "futures and optio
    "Bio":"Dr. David W. Bullock is a Research Ass
    "James Caton": {"Website":"https://www.ndsu.edu/centers/pcpe/abc
    "Areas of Specialization": "Entrepreneurship, Ir
    "Bio":"James Caton is a faculty fellow at the ND
    "David Englund": {"Website":"https://www.ndsu.edu/agecon/faculty
    "Areas of Specialization": "Teaches Economic Pri
    "Bio":"David Englund is a lecturer in the depart
    "Erik Hanson": {"Website":"https://www.ndsu.edu/agecon/faculty/h
    "Areas of Specialization": "Ag Management, Ag Fi
    "Bio":"Erik Hanson is an Assistant Professor in
    "Ronald Haugen": {"Website":"https://www.ndsu.edu/agecon/about_u
    "Areas of Specialization": "Farm management incl
    "Bio":"Ron Haugen is an Extension Farm Managemer
    "Robert Hearne": {"Website":"https://www.ndsu.edu/agecon/faculty
    "Areas of Specialization": "water resources mana
    "Bio":"Dr. Bob Hearne has been in the Department
    "Jeremy Jackson": {"Website":"https://www.ndsu.edu/centers/pcpe/
    "Areas of Specialization": "public choice and th
    "Bio":" Jeremy Jackson is director of the Center
    "Prithviraj Lakkakula":{"Website":"https://www.ndsu.edu/agecon/fa
    "Areas of Specialization":"Blockchain, Ag
    "Bio":""},
    "Siew Lim": {"Website":"https://www.ndsu.edu/agecon/faculty/lim/#
    "Areas of Specialization": "applied microeconomi
    "Bio":"Siew Hoon Lim is an associate professor c
    "Raymond March": {"Website":"https://www.ndsu.edu/centers/pcpe/a
    "Areas of Specialization": "public and private p
    "Bio":"Raymond March is a scholar at the Challey
    "Dragan Miljkovic": {"Website":"https://www.ndsu.edu/agecon/facu
    "Areas of Specialization": "agricultural price a
    "Bio":"Dragan Miljkovic is professor of agricult
    "Frayne Olson": {"Website":"https://www.ndsu.edu/agecon/faculty/
    "Areas of Specialization": " crop marketing stra
    "Bio":"Dr. Frayne Olson is the Crop Economist/Ma
    "Bryon Parman": {"Website":"https://www.ndsu.edu/agecon/faculty/
    "Areas of Specialization": "",
    "Bio":""},
    "Tim Petry": {"Website":"https://www.ndsu.edu/agecon/faculty/pet
    "Areas of Specialization": "Price Forecasting",
    "Bio":"Tim Petry was raised on a livestock ranch
    "Xudong Rao": {"Website":"https://www.ndsu.edu/agecon/faculty/ra
    "Areas of Specialization": "Farm and Agribusines
    "Bio":"Rao is an assistant professor of agricult
    "Veeshan Rayamajhee": {"Website":"https://www.ndsu.edu/centers/p
    "Areas of Specialization": "Public Choice and Ne
    "Bio":"Veeshan Rayamajhee is a scholar at the Ch
    "David Ripplinger": {"Website":"https://www.ndsu.edu/agecon/facu
    "Areas of Specialization": "Bioenergy",
    "Bio":"David Ripplinger is an Associate Professo
    "David Roberts": {"Website":"https://www.ndsu.edu/agecon/faculty
    "Areas of Specialization": "agricultural product
```



```
In [21]: faculty_df.loc["Tim Petry"]["Bio"]
```

```
Out[21]: 'Tim Petry was raised on a livestock ranch in Northwestern North Dakota. He graduated from North Dakota State University with a major in Agricultural Economics in 1969 and served two years in the US Army. Petry returned to NDSU and completed a Master's Degree in Agricultural Economics with an agricultural marketing emphasis in 1973. He was a member of the teaching/research staff in the Department of Agricultural Economics for 30 years. During his teaching tenure, he taught many marketing courses including several livestock marketing classes, and a very popular introduction to agricultural marketing class. In 2002, Petry retired from teaching and joined the NDSU Extension Service as a Livestock Marketing Economist. He travels extensively in North Dakota and the surrounding area conducting meetings on livestock marketing educational topics. Petry writes a popular monthly "Market Advisor" column on current livestock marketing issues. Copies of his presentations, columns, and other current information affecting the livestock industry are available on his web site: www.ag.ndsu.edu/livestockeconomics. Tim Petry and his wife Shirley have three grown daughters.'
```

```
In [9]: faculty_df.index
```

```
Out[9]: Index(['William Nganje', 'David Bullock', 'James Caton', 'David Englund',  
              'Erik Hanson', 'Ronald Haugen', 'Robert Hearne', 'Jeremy Jackson',  
              'Prithviraj Lakkakula', 'Siew Lim', 'Raymond March', 'Dragan Miljkovic',  
              'Frayne Olson', 'Bryon Parman', 'Tim Petry', 'Xudong Rao',  
              'Veeshan Rayamajhee', 'David Ripplinger', 'David Roberts',  
              'Kristi Schweiss', 'Anupa Sharma', 'Cheryl Wachenheim',  
              'William Wilson'],  
             dtype='object')
```

In [10]: `faculty_df.keys`

Out[10]: <bound method NDFrame.keys of
 Website \

William Nganje	https://www.ndsu.edu/agecon/faculty/william_ng... (http s://www.ndsu.edu/agecon/faculty/william_ng...)
David Bullock	https://www.ndsu.edu/agecon/faculty/bullock/#c... (http s://www.ndsu.edu/agecon/faculty/bullock/#c...)
James Caton	https://www.ndsu.edu/centers/pcpe/about/direct... (http s://www.ndsu.edu/centers/pcpe/about/direct...)
David Englund	https://www.ndsu.edu/agecon/faculty/englund/#c... (http s://www.ndsu.edu/agecon/faculty/englund/#c...)
Erik Hanson	https://www.ndsu.edu/agecon/faculty/hanson/#c6... (http s://www.ndsu.edu/agecon/faculty/hanson/#c6...)
Ronald Haugen	https://www.ndsu.edu/agecon/about_us/faculty/r... (http s://www.ndsu.edu/agecon/about_us/faculty/r...)
Robert Hearne	https://www.ndsu.edu/agecon/faculty/hearne/#c6... (http s://www.ndsu.edu/agecon/faculty/hearne/#c6...)
Jeremy Jackson	https://www.ndsu.edu/centers/pcpe/about/direct... (http s://www.ndsu.edu/centers/pcpe/about/direct...)
Prithviraj Lakkakula	https://www.ndsu.edu/agecon/faculty/prithviraj... (http s://www.ndsu.edu/agecon/faculty/prithviraj...)
Siew Lim	https://www.ndsu.edu/agecon/faculty/lim/#c624837 (http s://www.ndsu.edu/agecon/faculty/lim/#c624837)
Raymond March	https://www.ndsu.edu/centers/pcpe/about/direct... (http s://www.ndsu.edu/centers/pcpe/about/direct...)
Dragan Miljkovic	https://www.ndsu.edu/agecon/faculty/miljkovic/... (http s://www.ndsu.edu/agecon/faculty/miljkovic/...)
Frayne Olson	https://www.ndsu.edu/agecon/faculty/olson/#c62... (http s://www.ndsu.edu/agecon/faculty/olson/#c62...)
Bryon Parman	https://www.ndsu.edu/agecon/faculty/parman/#c6... (http s://www.ndsu.edu/agecon/faculty/parman/#c6...)
Tim Petry	https://www.ndsu.edu/agecon/faculty/petry/#c62... (http s://www.ndsu.edu/agecon/faculty/petry/#c62...)
Xudong Rao	https://www.ndsu.edu/agecon/faculty/rao/#c629066 (http s://www.ndsu.edu/agecon/faculty/rao/#c629066)
Veeshan Rayamajhee	https://www.ndsu.edu/centers/pcpe/about/direct... (http s://www.ndsu.edu/centers/pcpe/about/direct...)
David Ripplinger	https://www.ndsu.edu/agecon/faculty/ripplinger... (http s://www.ndsu.edu/agecon/faculty/ripplinger...)
David Roberts	https://www.ndsu.edu/agecon/faculty/roberts/#c... (http s://www.ndsu.edu/agecon/faculty/roberts/#c...)
Kristi Schweiss	https://www.ndsu.edu/agecon/faculty/schweiss/#... (http s://www.ndsu.edu/agecon/faculty/schweiss/#...)
Anupa Sharma	https://www.ndsu.edu/agecon/faculty/sharma/#c6... (http s://www.ndsu.edu/agecon/faculty/sharma/#c6...)
Cheryl Wachenheim	https://www.ndsu.edu/agecon/faculty/wachenheim... (http s://www.ndsu.edu/agecon/faculty/wachenheim...)
William Wilson	https://www.ndsu.edu/agecon/faculty/wilson/#c6... (http s://www.ndsu.edu/agecon/faculty/wilson/#c6...)

	Areas of Specialization \
William Nganje	Risk management; financial analysis; economics...
David Bullock	futures and options markets, over-the-counter ...
James Caton	Entrepreneurship, Institutions, Macroeconomics...
David Englund	Teaches Economic Principles, Led NDSU NAMA to ...
Erik Hanson	Ag Management, Ag Finance

Ronald Haugen	Farm management including: crop budgets, crop ...
Robert Hearne	water resources management institutions, water...
Jeremy Jackson	public choice and the political economy; the s...
Prithviraj Lakkakula	Blockchain, Agricultural Economics
Siew Lim	applied microeconomics, production economics, ...
Raymond March	public and private provision and governance of...
Dragan Miljkovic	agricultural price analysis, international eco...
Frayne Olson	crop marketing strategies, crop outlook and p...
Bryon Parman	
Tim Petry	Price Forecasting
Xudong Rao	Farm and Agribusiness Management, Risk Analysi...
Veeshan Rayamajhee	Public Choice and New Institutional Economics
David Ripplinger	Bioenergy
David Roberts	agricultural production methods on the environ...
Kristi Schweiss	
Anupa Sharma	International Trade Agreements, Trade Patterns...
Cheryl Wachenheim	eliciting perceptions and valuations from con...
William Wilson	commodity marketing, logistics and trading

William Nganje	Bio
David Bullock	NA
James Caton	Dr. David W. Bullock is a Research Associate P...
David Englund	James Caton is a faculty fellow at the NDSU Ce...
Erik Hanson	David Englund is a lecturer in the department....
Ronald Haugen	Erik Hanson is an Assistant Professor in the D...
Robert Hearne	Ron Haugen is an Extension Farm Management Spe...
Jeremy Jackson	Dr. Bob Hearne has been in the Department of A...
Prithviraj Lakkakula	Jeremy Jackson is director of the Center for ...
Siew Lim	Siew Hoon Lim is an associate professor of eco...
Raymond March	Raymond March is a scholar at the Challey Inst...
Dragan Miljkovic	Dragan Miljkovic is professor of agricultural ...
Frayne Olson	Dr. Frayne Olson is the Crop Economist/Marketi...
Bryon Parman	
Tim Petry	Tim Petry was raised on a livestock ranch in N...
Xudong Rao	Rao is an assistant professor of agricultural ...
Veeshan Rayamajhee	Veeshan Rayamajhee is a scholar at the Challey...
David Ripplinger	David Ripplinger is an Associate Professor in ...
David Roberts	David Roberts is an Assistant Professor of Agr...
Kristi Schweiss	Assistant Director, QBCC
Anupa Sharma	Anupa Sharma is an Assistant Professor in the ...
Cheryl Wachenheim	Cheryl Wachenheim is a Professor in the Depart...
William Wilson	Dr. William W. Wilson received his PhD in Agri... >

```
In [11]: faculty_df.keys()
```

```
Out[11]: Index(['Website', 'Areas of Specialization', 'Bio'], dtype='object')
```

```
In [12]: faculty_df.loc["James Caton"]
```

```
Out[12]: Website      https://www.ndsu.edu/centers/pcpe/about/direct... (h
https://www.ndsu.edu/centers/pcpe/about/direct...)
Areas of Specialization  Entrepreneurship, Institutions, Macroeconomics...
Bio                      James Caton is a faculty fellow at the NDSU Ce...
Name: James Caton, dtype: object
```

```
In [14]: names = faculty_df.index  
for name in names:  
    print(name)
```

William Nganje
David Bullock
James Caton
David Englund
Erik Hanson
Ronald Haugen
Robert Hearne
Jeremy Jackson
Prithviraj Lakkakula
Siew Lim
Raymond March
Dragan Miljkovic
Frayne Olson
Bryon Parman
Tim Petry
Xudong Rao
Veeshan Rayamajhee
David Ripplinger
David Roberts
Kristi Schweiss
Anupa Sharma
Cheryl Wachenheim
William Wilson

```
In [15]: for name in names:
         print(faculty_df.loc[name])
```

```
Website          https://www.ndsu.edu/agecon/faculty/william_ng...
                 (https://www.ndsu.edu/agecon/faculty/william_ng...)
Areas of Specialization Risk management; financial analysis; economics...
Bio                                                       NA
Name: William Nganje, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/bullock/#c...
                 (https://www.ndsu.edu/agecon/faculty/bullock/#c...)
Areas of Specialization futures and options markets, over-the-counter ...
Bio              Dr. David W. Bullock is a Research Associate P...
Name: David Bullock, dtype: object
Website          https://www.ndsu.edu/centers/pcpe/about/direct...
                 (https://www.ndsu.edu/centers/pcpe/about/direct...)
Areas of Specialization Entrepreneurship, Institutions, Macroeconomics...
Bio              James Caton is a faculty fellow at the NDSU Ce...
Name: James Caton, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/englund/#c...
                 (https://www.ndsu.edu/agecon/faculty/englund/#c...)
Areas of Specialization Teaches Economic Principles, Led NDSU NAMA to ...
Bio              David Englund is a lecturer in the department....
Name: David Englund, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/hanson/#c6...
                 (https://www.ndsu.edu/agecon/faculty/hanson/#c6...)
Areas of Specialization Ag Management, Ag Finance
Bio              Erik Hanson is an Assistant Professor in the D...
Name: Erik Hanson, dtype: object
Website          https://www.ndsu.edu/agecon/about_us/faculty/r...
                 (https://www.ndsu.edu/agecon/about_us/faculty/r...)
Areas of Specialization Farm management including: crop budgets, crop ...
Bio              Ron Haugen is an Extension Farm Management Spe...
Name: Ronald Haugen, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/hearne/#c6...
                 (https://www.ndsu.edu/agecon/faculty/hearne/#c6...)
Areas of Specialization water resources management institutions, water...
Bio              Dr. Bob Hearne has been in the Department of A...
Name: Robert Hearne, dtype: object
Website          https://www.ndsu.edu/centers/pcpe/about/direct...
                 (https://www.ndsu.edu/centers/pcpe/about/direct...)
Areas of Specialization public choice and the political economy; the s...
Bio              Jeremy Jackson is director of the Center for ...
Name: Jeremy Jackson, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/prithviraj...
                 (https://www.ndsu.edu/agecon/faculty/prithviraj...)
Areas of Specialization Blockchain, Agricultural Economics
Bio
Name: Prithviraj Lakkakula, dtype: object
Website          https://www.ndsu.edu/agecon/faculty/lim/#c624837
                 (https://www.ndsu.edu/agecon/faculty/lim/#c624837)
Areas of Specialization applied microeconomics, production economics, ...
Bio              Siew Hoon Lim is an associate professor of eco...
Name: Siew Lim, dtype: object
Website          https://www.ndsu.edu/centers/pcpe/about/direct...
                 (https://www.ndsu.edu/centers/pcpe/about/direct...)
Areas of Specialization public and private provision and governance of...
```


Bio Raymond March is a scholar at the Challey Inst...
 Name: Raymond March, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/miljkovic/...>
 (https://www.ndsu.edu/agecon/faculty/miljkovic/...)
 Areas of Specialization agricultural price analysis, international eco...
 Bio Dragan Miljkovic is professor of agricultural ...
 Name: Dragan Miljkovic, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/olson/#c62...>
 (https://www.ndsu.edu/agecon/faculty/olson/#c62...)
 Areas of Specialization crop marketing strategies, crop outlook and p...
 Bio Dr. Frayne Olson is the Crop Economist/Marketi...
 Name: Frayne Olson, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/parman/#c6...>
 (https://www.ndsu.edu/agecon/faculty/parman/#c6...)
 Areas of Specialization
 Bio
 Name: Bryon Parman, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/petry/#c62...>
 (https://www.ndsu.edu/agecon/faculty/petry/#c62...)
 Areas of Specialization Price Forecasting
 Bio Tim Petry was raised on a livestock ranch in N...
 Name: Tim Petry, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/rao/#c629066>
 (https://www.ndsu.edu/agecon/faculty/rao/#c629066)
 Areas of Specialization Farm and Agribusiness Management, Risk Analysi...
 Bio Rao is an assistant professor of agricultural ...
 Name: Xudong Rao, dtype: object
 Website <https://www.ndsu.edu/centers/pcpe/about/direct...>
 (https://www.ndsu.edu/centers/pcpe/about/direct...)
 Areas of Specialization Public Choice and New Institutional Economics
 Bio Veeshan Rayamajhee is a scholar at the Challey...
 Name: Veeshan Rayamajhee, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/ripplinger...>
 (https://www.ndsu.edu/agecon/faculty/ripplinger...)
 Areas of Specialization Bioenergy
 Bio David Ripplinger is an Associate Professor in ...
 Name: David Ripplinger, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/roberts/#c...>
 (https://www.ndsu.edu/agecon/faculty/roberts/#c...)
 Areas of Specialization agricultural production methods on the environ...
 Bio David Roberts is an Assistant Professor of Agr...
 Name: David Roberts, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/schweiss/#...>
 (https://www.ndsu.edu/agecon/faculty/schweiss/#...)
 Areas of Specialization
 Bio Assistant Director, QBCC
 Name: Kristi Schweiss, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/sharma/#c6...>
 (https://www.ndsu.edu/agecon/faculty/sharma/#c6...)
 Areas of Specialization International Trade Agreements, Trade Patterns...
 Bio Anupa Sharma is an Assistant Professor in the ...
 Name: Anupa Sharma, dtype: object
 Website <https://www.ndsu.edu/agecon/faculty/wachenheim...>
 (https://www.ndsu.edu/agecon/faculty/wachenheim...)
 Areas of Specialization eliciting perceptions and valuations from con...
 Bio Cheryl Wachenheim is a Professor in the Depart...
 Name: Cheryl Wachenheim, dtype: object

```
Website https://www.ndsu.edu/agecon/faculty/wilson/#c6...  
(https://www.ndsu.edu/agecon/faculty/wilson/#c6...)  
Areas of Specialization commodity marketing, logistics and trading  
Bio Dr. William W. Wilson received his PhD in Agri...  
Name: William Wilson, dtype: object
```

```
In [16]: keys = faculty_df.keys()  
keys
```

```
Out[16]: Index(['Website', 'Areas of Specialization', 'Bio'], dtype='object')
```

```
In [17]: for name in names:  
         print(name)  
         for key in keys:  
             print(key)#, faculty_df.loc[name][key])  
         print()
```

```
William Nganje  
Website  
Areas of Specialization  
Bio
```

```
David Bullock  
Website  
Areas of Specialization  
Bio
```

```
James Caton  
Website  
Areas of Specialization  
Bio
```

```
David Englund  
Website  
Areas of Specialization  
Bio
```

```
In [18]: for name in names:
          print (name)
          for key in keys:
              print(key+ ":", faculty_df.loc[name, key])
          print()
```

William Nganje

Website: https://www.ndsu.edu/agecon/faculty/william_nganje/#c622350 (http://www.ndsu.edu/agecon/faculty/william_nganje/#c622350)

Areas of Specialization: Risk management; financial analysis; economics of obesity, food safety and food terrorism; experimental economics; and consumer choice theory

Bio: NA

David Bullock

Website: <https://www.ndsu.edu/agecon/faculty/bullock/#c622728> (<https://www.ndsu.edu/agecon/faculty/bullock/#c622728>)

Areas of Specialization: futures and options markets, over-the-counter derivatives, trading, risk management, agrifinance, Monte Carlo simulation, and Big Data

Bio: Dr. David W. Bullock is a Research Associate Professor affiliated with the Center for Trading and Risk at NDSU. His research interests include futures and options markets, over-the-counter derivatives, trading, risk management, agrifinance, Monte Carlo simulation, and Big Data applications in agriculture. His academic research in option portfolio theory has been published in

```
In [19]: faculty_df[faculty_df["Areas of Specialization"].str.contains("Risk")]
```

Out[19]:

	Website	Areas of Specialization	Bio
William Nganje	https://www.ndsu.edu/agecon/faculty/william_ng...	Risk management; financial analysis; economics...	NA
Xudong Rao	https://www.ndsu.edu/agecon/faculty/rao/#c629066	Farm and Agribusiness Management, Risk Analysis...	Rao is an assistant professor of agricultural ...

```
In [20]: lst = ["a", "b", "c"]
          "a" in lst
```

Out[20]: True