WiDS
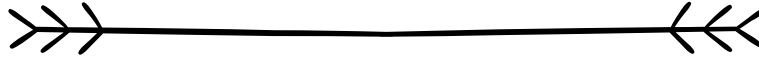# Blacksburg

MONDAY, FEBRUARY 11
3:00–8:30 PM

SCHEDULE

EVENT REGISTRATION
3:00-3:30 PM

LOBBY

WELCOME
3:30-3:40 PM

ASSEMBLY HALL

KEYNOTE SPEAKER: DR. MILINDA LAKKAM
3:40-4:05 PM

ASSEMBLY HALL

CAREER PANEL
4:05-5:00 PM

ASSEMBLY HALL

BREAK
5:00-5:20 PM

GRAND HALL

KEYNOTE SPEAKER: DR. SALLY MORTON
5:20-5:45 PM

ASSEMBLY HALL

DINNER
5:45-7:00 PM

MUSEUM

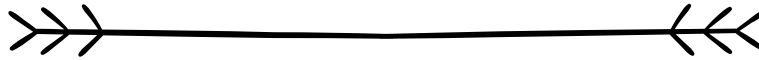### INTRO TUTORIAL
7:00-8:15 PM

ASSEMBLY HALL

ADVANCED TUTORIAL
7:00-8:15 PM

2ND FLOOR BOARD ROOM

KEYNOTE SPEAKERS

## DR. SALLY MORTON

DEAN, COLLEGE OF SCIENCE

SALLY C. MORTON IS DEAN OF THE COLLEGE OF SCIENCE AND PROFESSOR OF STATISTICS AT VIRGINIA TECH. HER METHODOLOGICAL WORK FOCUSES ON EVIDENCE SYNTHESIS, PARTICULARLY META-ANALYSIS, AND PATIENT-CENTERED COMPARATIVE EFFECTIVENESS RESEARCH. PREVIOUSLY, SALLY WAS CHAIR OF THE BIOSTATISTICS DEPARTMENT AT THE UNIVERSITY OF PITTSBURGH, VICE PRESIDENT FOR STATISTICS AND EPIDEMIOLOGY AT RTI INTERNATIONAL, AND HEAD OF THE RAND CORPORATION STATISTICS GROUP. SHE SERVED AS THE 2009 PRESIDENT OF THE AMERICAN STATISTICAL ASSOCIATION (ASA) AND RECEIVED A PHD IN STATISTICS FROM STANFORD UNIVERSITY.

KEYNOTE ABSTRACT

USING RACIAL BIAS IN DEATH PENALTY SENTENCING AS A MOTIVATING EXAMPLE, I WILL DISCUSS DEFINITIONS OF BIAS FROM STATISTICAL AND PERSONAL PERSPECTIVES, AND IMPLICATIONS FOR A SCIENTIST. MY TALK WILL ALSO INCLUDE SOME LESSONS LEARNED DURING 30 YEARS AS AN APPLIED STATISTICIAN WORKING ON HEALTH POLICY TOPICS, AND THEIR POTENTIAL RELEVANCE IN THE CAREER OF A MODERN DATA SCIENTIST. QUESTIONS AND COMMENTS WILL BE WELCOMED THROUGHOUT THE PRESENTATION.

KEYNOTE SPEAKERS
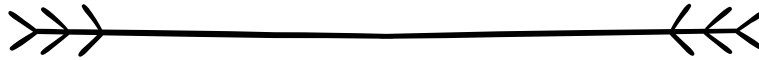
DR. MILINDA LAKKAM

SR. DATA SCIENTIST, LINKEDIN

MILINDA LAKKAM IS A SENIOR SOFTWARE ENGINEER IN THE ANTI-ABUSE AI TEAM AT LINKEDIN WHERE SHE HAS BEEN WORKING SINCE 2016. AT LINKEDIN MILINDA FOCUSES ON DETECTING AND PREVENTING THE USE OF AUTOMATED TOOLS THAT VIOLATE LINKEDIN'S TERMS OF SERVICE. PRIOR TO WORKING AT LINKEDIN MILINDA RECEIVED HER PH.D. FROM STANFORD UNIVERSITY IN COMPUTATIONAL AND MATHEMATICAL ENGINEERING, AND HER B.S. FROM I.I.T. MADRAS IN ELECTRICAL ENGINEERING.

KEYNOTE ABSTRACT

THE USE OF AUTOMATION TO STEAL LINKEDIN MEMBER DATA AND SEND SPAM INVITATIONS/MESSAGES VIOLATES OUR TERMS OF SERVICE AND THE PRIVACY EXPECTATIONS OF OUR MEMBERS. IN THIS TALK WE OUTLINE THE PROCESS AND TOOLS WE USE TO TACKLE THIS PROBLEM — FEATURE ENGINEERING, GENERATION OF SEED LABELS, OUTLIER DETECTION METHODS, AND EXTERNAL FEEDBACK TO IMPROVE OUR LABELS.

GUESTS

DR. JENNIFER VAN MULLEKOM

VT DEPARTMENT OF STATISTICS
DATA VISUALIZATION TUTORIAL

JENNIFER VAN MULLEKOM IS THE DIRECTOR OF THE
STATISTICAL APPLICATIONS AND INNOVATIONS GROUP
(SAIG) AND AN ASSOCIATE PROFESSOR OF PRACTICE IN
VIRGINIA TECH'S STATISTICS DEPARTMENT. SHE EARNED
HER BS IN MATHEMATICS AND MATHEMATICS EDUCATION AT
CONCORD COLLEGE, THEN HER MS AND PHD IN STATISTICS
AT VIRGINIA TECH. BEFORE JOINING THE FACULTY AT
VIRGINIA TECH, SHE WORKED IN A VARIETY OF STATISTICAL
ROLES IN ACADEMICS AND INDUSTRY, INCLUDING POSITIONS
AT LUBRIZOL, CAPITOL ONE, AND DUPONT.

TUTORIAL ABSTRACT

A GOOD DATA VISUALIZATION HELPS SCIENTISTS OR
BUSINESSES MORE EASILY UNDERSTAND THEIR DATA, MAKE
INFORMED DECISIONS, AND DEVELOP FUTURE STRATEGIES.
THIS TUTORIAL WILL EXPOSE ATTENDEES TO USEFUL
GUIDING PRINCIPLES FOR CLEAR AND EFFECTIVE DATA
VISUALIZATION, AND WILL DEMONSTRATE TOOLS FOR
MAKING THESE VISUALS. PARTICIPANTS ARE EXPECTED TO
HAVE SOME BASIC EXPOSURE TO PROGRAMMING, BUT
ASSUMES NO SPECIALIZED VISUALIZATION BACKGROUND.

GUESTS

CHERYL DANNER

EXPEDITION TECHNOLOGY
FOCAL-LOSS-BASED DEEP LEARNING FOR OBJECT
DETECTION TUTORIAL

CHERYL GRADUATED WITH A BS IN ENGINEERING FROM
FRANKLIN W. OLIN COLLEGE OF ENGINEERING AND STARTED
WORKING AS A SYSTEMS ENGINEER FOR RAYTHEON IN
BOSTON, MA. AFTER GOING BACK TO SCHOOL AND EARNING
AN MS IN COMPUTATIONAL AND MATHEMATICAL
ENGINEERING FROM STANFORD UNIVERSITY, SHE MOVED
TO NORTHERN VIRGINIA AND JOINED THE TECHNICAL STAFF
AT EXPEDITION TECHNOLOGY, INC. IN 2017.
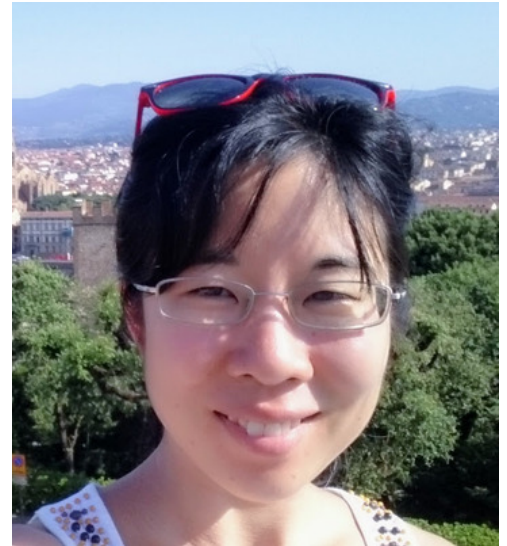
TUTORIAL ABSTRACT

DEEP LEARNING HAS REVOLUTIONIZED IMAGE PROCESSING,
BUT AT THIS POINT, IT CAN BE USED FOR SO MUCH MORE
THAN CLASSIFYING PICTURES OF DOGS. THIS TUTORIAL
WILL INTRODUCE A FEW APPLICATIONS IN COMPUTER
VISION AND SIGNAL PROCESSING WHERE DEEP LEARNING IS
RAPIDLY ADVANCING THE STATE OF THE ART. WE WILL
DISCUSS TECHNIQUES FOR BUILDING BETTER CUSTOM
DEEP LEARNING SYSTEMS WITH AN EMPHASIS ON FOCAL
LOSS. TO RUN THE INTERACTIVE FOCAL LOSS EXAMPLE,
BRING A LAPTOP THAT CAN RUN TENSORFLOW AND SCIKIT-
LEARN IN A JUPYTER NOTEBOOK.

G U E S T S

C H R I S T I N A   E I G I N G E R
NIELSEN

CHRISTINA IS A SENIOR DATA SCIENTIST AT NIELSEN AND A FELLOW HOKIE, HAVING GRADUATED FROM VIRGINIA TECH'S STATISTICS DEPARTMENT. HER WORK HAS TAKEN HER AROUND THE GLOBE SUPPORTING VARIOUS TEAMS ACROSS NIELSEN'S DATA SCIENCE ORGANIZATION. HER EXPERIENCE RANGES FROM MACHINE LEARNING AND DATA MODELING TO STATISTICAL SAMPLING AND SURVEY METHODS, BUT HER PASSION LIES IN BRINGING THESE CONCEPTS TO THE LARGER BUSINESS AND COMMUNICATING THEM IN A WAY THAT ANYONE CAN UNDERSTAND.

WE WOULD LIKE TO THANK NIELSEN FOR SPONSORING THIS EVENT AND SENDING THE FOLLOWING REPRESENTATIVES TO ATTEND THIS EVENT!

K Y R A   V I L A
NIELSEN

E L S A   P L A Z A
NIELSEN

nielsen

DINNER TOPICS

FAIRNESS IN MACHINE LEARNING
SIRUI YAO, VT COMPUTER SCIENCE

DATA SCIENCE FOR SOCIAL SCIENCE
XU LIN, ECONOMICS

TOOLS FOR REPRODUCIBLE RESEARCH
LEAH JOHNSON, VT STAT/CMDA

DATA INTEGRITY AND PRIVACY
GRETCHEN MATTHEWS, VT MATH

LANDING YOUR FIRST INTERNSHIP
JULIANNE CHUNG, VT MATH/CMDA

DATA ETHICS
IDRIS ADJERID, VT BUSINESS INFORMATION TECHNOLOGY

CHOOSING YOUR MODELS AND TOOLS
BERT HUANG, VT COMPUTER SCIENCE

THE DATA SCIENCE JOB MARKET
ALI HABIBNIA, VT ECON/CMDA

FOR MORE INFORMATION ABOUT THE GLOBAL WOMEN IN DATA SCIENCE ORGANIZATION, THE DATATHON, AND PODCAST, GO TO HTTPS://WWW.WIDSCONFERENCE.ORG/

WE WOULD LIKE TO THANK THE FOLLOWING ORGANIZATIONS: