

## Exploration # 4: Best Actors and Actresses

For this problem you will be analyzing the data on the ages at which actors and actresses win Oscars.

### Part I:

- (a) Preliminaries: Do you think that a gender difference exists in the ages at which actors and actresses win Oscars? Answer before looking at any of the data.
- (b) Collect the data. Attached you will find data for the ages of the actors and actresses with they received an Oscar. {Note: For simplicity, the age of an actress or actor is calculated by age equals year of award minus year of birth. This eliminates the need to know the actual date of the academy award ceremony each year.}
- (c) Represent the data using back-to-back split stem-and-leaf plot.
- (d) Calculate the five number summary, mode, range, interquartile range, the mean and standard deviation. Test for outliers.
- (e) Draw parallel box-and-whisker plots. (*Draw beautiful plots! ☺*)
- (f) Analysis: Write a short report summarizing your conclusions based on your graphs and statistics. Be a statistician ... report the facts not your opinion. (The facts are what might cause one to explore the reason why.) How did your conclusions compare with your initial thoughts? What interesting things did you discover in the process of analyzing this data? Explain.

### Part II:

- (a) Preliminaries: Do you think there are historical trends in the data? For example: Is there a recent trend toward giving Oscars to older actresses? etc.
- (b) Collect and decide how you might best represent this data -- bar graph, line graph, stem-and-leaf plot, box-and-whisker plot -- you choose -- analyze your data and finally form a conclusion -- relate back to you're your initial thoughts.

**Ages of Oscar Winning Actors**

<b>Year</b>	<b>Actor</b>	<b>Movie</b>	<b>Age</b>
1928	Emil Jannings	The Way of All Flesh	44
1929	Warner Baxter	In Old Arizona	41
1930	George Arliss	Disraeli	62
1931	Lionel Barrymore	A Free Soul	53
1932	Fredric March	Dr. Jekyll and Mr. Hyde	35
1932	Wallace Beery	The Champ	47
1933	Charles Laughton	The Private Life of Henry VIII	34
1934	Clark Gable	It Happened One Night	34
1935	Victor McLaglen	The Informer	52
1936	Paul Muni	The Story of Louis Pasteur	41
1937	Spencer Tracey	Captain Courageous	37
1938	Spencer Tracey	Boys Town	38
1939	Robert Donat	Goodbye Mr. Chips	34
1940	James Stewart	The Philadelphia Story	32
1941	Gary Cooper	Sergeant York	40
1942	James Cagney	Yankee Doodle Dandy	43
1943	Paul Lukas	Watch On The Rhine	48
1944	Bing Crosby	Going My Way	41
1945	Ray Milland	The Lost Weekend	41
1946	Fredric March	The Best Years of Our Lives	49
1947	Ronald Colman	A Double Life	57
1948	Laurence Olivier	Hamlet	41
1949	Broderick Crawford	A The King's Men	38
1950	Jose Ferrer	Cyrano De Bergerac	42
1951	Humphrey Bogart	The African Queen	52
1952	Gary Cooper	High Noon	51
1953	William Holden	Stalag 17	35
1954	Marlon Brando	On The Waterfront	30
1955	Ernest Borgnine	Marty	39
1956	Yul Brynner	The King and I	41
1957	Alec Guinness	The Bridge Over the River Kwai	43
1958	David Niven	Separate Tables	48
1959	Charlton Heston	Ben	35
1960	Burt Lancaster	Elmer Gantry	47
1961	Maximilian Schell	Judgement at Nuremburg	31

1962	Gregory Peck	To Kill A Mocking Bird	47
1963	Sidney Poitier	Lillies of the Field	37
1964	Rex Harrison	My Fair Lady	59
1965	Lee Marvin	Cat Ballou	42
1966	Paul Scofield	A Man for All Seasons	45
1967	Rod Steiger	In the Heat of the Night	42
1968	Cliff Robertson	Charly	43
1969	John Wayne	True Grit	62
1970	George C. Scott	Patton	44
1971	Gene Hackman	The French Connection	42
1972	Marlon Brando	The Godfather	49
1973	Jack Lemon	Save the Tiger	49
1974	Art Carney	Harry and Tonto	56
1975	Jack Nicholson	One Flew Over the Cuckoo's Nest	38
1976	Peter Finch	Network	60
1977	Richard Dreyfuss	The Goodbye Girl	30
1978	Jon Voight	Coming Home	40
1979	Dustin Hoffman	Kramer vs Kramer	42
1980	Robert De Niro	Raging Bull	37
1981	Henry Fonda	On Golden Pond	76
1982	Ben Kingsley	Gandhi	39
1983	Robert Duvall	Tender Mercies	52
1984	F. Murray Abraham	Amadeus	45
1985	William Hurt	Kiss of the Spider Woman	36
1986	Paul Newman	The Color of Money	62
1987	Michael Douglas	Wall Street	43
1988	Dustin Hoffman	Rain Man	51
1989	Daniel Day Lewis	My Left Foot	32
1990	Jeremy Irons	Reversal of Fortune	43
1991	Anthony Hopkins	The Silence of the Lambs	54
1992	Al Pacino	Scent of a Woman	52
1993	Tom Hanks	Philadelphia	37
1994	Tom Hanks	Forrest Gump	38
1995	Nicolas Cage	Leacving Las Vegas	32
1996	Geoffrey Rush	Shine	45
1997	Jack Nicholson	As Good As It Gets	60
1998	Roberto Benigni	Life is Beautiful	46
1999	Kevin Spacey	American Beauty	40

2000	Russell Crowe	Gladiator	36
2001	Denzel Washington	Training Day	47
2002	Adrien Brody	The Pianist	29
2003	Sean Penn	Mystic River	43
2004	Jamie Foxx	Ray	37
2005	Philip Seymour Hoffman	Capote	38
2006	Forrest Whitaker	The Last King of Scotland	45
2007	Daniel Day Lewis	There Will Be Blood	50
2008	Sean Penn	Milk	48

### Ages of Oscar Winning Actresses

Year	Actress	Movie	Age
1928	Janet Gaynor	7th Heaven	22
1929	Mary Pickford	Coquette	37
1930	Norma Shearer	The Divorcee	28
1931	Marie Dressler	Min and Bill	63
1932	Helen Hayes	The Sin of Madelon Claudet	32
1933	Katherine Hepburn	Morning Glory	26
1934	Claudette Colbert	It Happened One Night	31
1935	Bette Davis	Dangerous	27
1936	Luise Rainer	The Great Ziegfeld	27
1937	Luise Rainer	The Good Earth	28
1938	Bette Davis	Jezabel	30
1939	Vivian Leigh	Gone With the Wind	26
1940	Ginger Rogers	Kitty Foyle	29
1941	Joan Fontaine	Suspicion	24
1942	Greer Garson	Mrs Miniver	38
1943	Jennifer Jones	The Song of Bernadette	25
1944	Ingrid Bergman	Gaslight	29
1945	Joan Crawford	Mildred Pierce	40
1946	Olivia de Havilland	To Each His Own	30
1947	Loretta Young	The Farmer's Daughter	35
1948	Jane Wyman	Johnny Belinda	35
1949	Olivia de Havilland	The Heiress	33
1950	Judy Holiday	Born Yesterday	29
1951	Vivian Leigh	A Streetcar Named Desire	38
1952	Shirley Booth	Come Back, Little Sheba	54

1953	Audrey Hepburn	Roman Holiday	24
1954	Grace Kelly	The Country Girl	25
1955	Anna Magnani	The Rose Tattoo	48
1956	Ingrid Bergman	Anastasia	41
1957	Joanne Woodward	The Three Faces of Eve	28
1958	Susan Hayward	I Want To Live!	41
1959	Simone Signoret	Room At The Top	39
1960	Elizabeth Taylor	Butterfield 8	30
1961	Sophia Loren	Two Women	26
1962	Anne Bancroft	The Miracle Worker	31
1963	Patricia Neal	Hud	38
1964	Julie Andrews	Mary Poppins	29
1965	Julie Christie	Darling	26
1966	Elizabeth Taylor	Who's Afraid of Virginia Wolf	35
1967	Katherine Hepburn	Guess Who's Coming to Dinner?	60
1968	Barbara Streisand	Funny Girl	26
1968	Katherine Hepburn	The Lion In Winter	61
1969	Maggie Slith	The Prime of Miss Jean Brodie	36
1970	Glenda Jackson	Women in Love	34
1971	Jane Fonda	Klute	34
1972	Liza Minnelli	Cabaret	27
1973	Glenda Jackson	A Touch Of Class	37
1974	Ellen Burstyn	Alice Doesn't Live Here Anymore	42
1975	Louise Fletcher	One Flew Over the Cuckoo's Nest	41
1976	Faye Dunaway	Network	36
1977	Diane Keaton	Annie Hall	32
1978	Jane Fonda	Coming Home	41
1979	Sally Field	Norma Rae	33
1980	Sissy Spacek	Coal Miner's Daughter	31
1981	Katherine Hepburn	On Golden Pond	74
1982	Meryl Streep	Sophie's Choice	33
1983	Shirley MacLaine	Terms of Endearment	49
1984	Sally Field	Places in the Heart	38
1985	Geraldine Page	The Trip tp Bountiful	61
1986	Marlee Matlin	Children of a Lesser God	21
1987	Cher	Moonstruck	41
1988	Jodie Foster	The Accused	26
1989	Jessica Tandy	Driving Miss Daisy	80
1990	Kathy Bates	Misery	42

1991	Jodie Foster	The Silence of the Lambs	29
1992	Emma Thompson	Howards End	33
1993	Holly Hunter	The Piano	36
1994	Jessica Lange	Blue Sky	45
1995	Susan Sarandon	Dead Man Walking	49
1996	Frances McDormand	Fargo	39
1997	Helen Hunt	As Good As It Gets	34
1998	Gwyneth Paltrow	Shakespeare in Love	26
1999	Hilary Swank	Boys Don't Cry	25
2000	Julia Roberts	Erin Brockovich	33
2001	Halle Berry	Monster's Ball	35
2002	Nicole Kidman	The Hours	35
2003	Charlize Theron	Monster	28
2004	Hilary Swank	Million Dollar Baby	30
2005	Reese Witherspoon	Walk the Line	29
2006	Helen Mirren	The Queen	61
2007	Marion Cotillard	La Vie en Rose	32
2008	Kate Winslet	The Reader	33