

Input data and preliminary stuff:

$$\text{Team} := \begin{pmatrix} \text{"North Carolina"} \\ \text{"Virginia"} \\ \text{"Virginia Tech"} \\ \text{"Boston College"} \\ \text{"Maryland"} \\ \text{"Georgia Tech"} \\ \text{"Duke"} \\ \text{"Clemson"} \\ \text{"Florida St."} \\ \text{"North Carolina St."} \\ \text{"Wake Forest"} \\ \text{"Miami FL"} \end{pmatrix} \quad \text{py} := \begin{pmatrix} 0.9882 \\ 0.9120 \\ 0.9320 \\ 0.9209 \\ 0.9709 \\ 0.9594 \\ 0.9723 \\ 0.9364 \\ 0.9248 \\ 0.7966 \\ 0.7527 \\ 0.7333 \end{pmatrix}$$

ORIGIN := 1

$i := 1.. \text{last}(\text{py}) \quad j := 1.. \text{last}(\text{py})$

There are only 12 teams, so we won't worry about computational efficiency and instead just calculate the log5 winning percentage for all 144 matchups (even though many won't be used):

$$\log_5(A, B) := \frac{A - A \cdot B}{A + B - 2 \cdot A \cdot B} \quad \text{PCT}_{i,j} := \log_5(\text{py}_i, \text{py}_j)$$

Calculate chances that each team will make it to Friday, Saturday, and Sunday:

$$\text{Fri} := \begin{pmatrix} 1 \\ 1 \\ 1 \\ 1 \\ \text{PCT}_{5,12} \\ \text{PCT}_{6,11} \\ \text{PCT}_{7,10} \\ \text{PCT}_{8,9} \\ \text{PCT}_{9,8} \\ \text{PCT}_{10,7} \\ \text{PCT}_{11,6} \\ \text{PCT}_{12,5} \end{pmatrix} \quad \text{Sat} := \begin{pmatrix} \text{PCT}_{8,9} \cdot \text{PCT}_{1,8} + \text{PCT}_{9,8} \cdot \text{PCT}_{1,9} \\ \text{PCT}_{7,10} \cdot \text{PCT}_{2,7} + \text{PCT}_{10,7} \cdot \text{PCT}_{2,10} \\ \text{PCT}_{6,11} \cdot \text{PCT}_{3,6} + \text{PCT}_{11,6} \cdot \text{PCT}_{3,11} \\ \text{PCT}_{5,12} \cdot \text{PCT}_{4,5} + \text{PCT}_{12,5} \cdot \text{PCT}_{4,12} \\ \text{PCT}_{5,12} \cdot \text{PCT}_{5,4} \\ \text{PCT}_{6,11} \cdot \text{PCT}_{6,3} \\ \text{PCT}_{7,10} \cdot \text{PCT}_{7,2} \\ \text{PCT}_{8,9} \cdot \text{PCT}_{8,1} \\ \text{PCT}_{9,8} \cdot \text{PCT}_{9,1} \\ \text{PCT}_{10,7} \cdot \text{PCT}_{10,2} \\ \text{PCT}_{11,6} \cdot \text{PCT}_{11,3} \\ \text{PCT}_{12,5} \cdot \text{PCT}_{12,4} \end{pmatrix}$$

$$\text{Sun} := \text{Sat} \cdot \begin{pmatrix} \text{Sat}_4 \cdot \text{PCT}_{1,4} + \text{Sat}_5 \cdot \text{PCT}_{1,5} + \text{Sat}_{12} \cdot \text{PCT}_{1,12} \\ \text{Sat}_3 \cdot \text{PCT}_{2,3} + \text{Sat}_6 \cdot \text{PCT}_{2,6} + \text{Sat}_{11} \cdot \text{PCT}_{2,11} \\ \text{Sat}_2 \cdot \text{PCT}_{3,2} + \text{Sat}_7 \cdot \text{PCT}_{3,7} + \text{Sat}_{10} \cdot \text{PCT}_{3,10} \\ \text{Sat}_1 \cdot \text{PCT}_{4,1} + \text{Sat}_8 \cdot \text{PCT}_{4,8} + \text{Sat}_9 \cdot \text{PCT}_{4,9} \\ \text{Sat}_1 \cdot \text{PCT}_{5,1} + \text{Sat}_8 \cdot \text{PCT}_{5,8} + \text{Sat}_9 \cdot \text{PCT}_{5,9} \\ \text{Sat}_2 \cdot \text{PCT}_{6,2} + \text{Sat}_7 \cdot \text{PCT}_{6,7} + \text{Sat}_{10} \cdot \text{PCT}_{6,10} \\ \text{Sat}_3 \cdot \text{PCT}_{7,3} + \text{Sat}_6 \cdot \text{PCT}_{7,6} + \text{Sat}_{11} \cdot \text{PCT}_{7,11} \\ \text{Sat}_4 \cdot \text{PCT}_{8,4} + \text{Sat}_5 \cdot \text{PCT}_{8,5} + \text{Sat}_{12} \cdot \text{PCT}_{8,12} \\ \text{Sat}_4 \cdot \text{PCT}_{9,4} + \text{Sat}_5 \cdot \text{PCT}_{9,5} + \text{Sat}_{12} \cdot \text{PCT}_{9,12} \\ \text{Sat}_3 \cdot \text{PCT}_{10,3} + \text{Sat}_6 \cdot \text{PCT}_{10,6} + \text{Sat}_{11} \cdot \text{PCT}_{10,11} \\ \text{Sat}_2 \cdot \text{PCT}_{11,2} + \text{Sat}_7 \cdot \text{PCT}_{11,7} + \text{Sat}_{10} \cdot \text{PCT}_{11,10} \\ \text{Sat}_1 \cdot \text{PCT}_{12,1} + \text{Sat}_8 \cdot \text{PCT}_{12,8} + \text{Sat}_9 \cdot \text{PCT}_{12,9} \end{pmatrix}$$

Calculate chance that team will win the championship:

$$\text{Champ} := \text{Sun} \cdot \left(\begin{array}{l} \text{Sun}_2 \cdot \text{PCT}_{1,2} + \text{Sun}_3 \cdot \text{PCT}_{1,3} + \text{Sun}_6 \cdot \text{PCT}_{1,6} + \text{Sun}_7 \cdot \text{PCT}_{1,7} + \text{Sun}_{10} \cdot \text{PCT}_{1,10} + \text{Sun}_{11} \cdot \text{PCT}_{1,11} \\ \text{Sun}_1 \cdot \text{PCT}_{2,1} + \text{Sun}_4 \cdot \text{PCT}_{2,4} + \text{Sun}_5 \cdot \text{PCT}_{2,5} + \text{Sun}_8 \cdot \text{PCT}_{2,8} + \text{Sun}_9 \cdot \text{PCT}_{2,9} + \text{Sun}_{12} \cdot \text{PCT}_{2,12} \\ \text{Sun}_1 \cdot \text{PCT}_{3,1} + \text{Sun}_4 \cdot \text{PCT}_{3,4} + \text{Sun}_5 \cdot \text{PCT}_{3,5} + \text{Sun}_8 \cdot \text{PCT}_{3,8} + \text{Sun}_9 \cdot \text{PCT}_{3,9} + \text{Sun}_{12} \cdot \text{PCT}_{3,12} \\ \text{Sun}_2 \cdot \text{PCT}_{4,2} + \text{Sun}_3 \cdot \text{PCT}_{4,3} + \text{Sun}_6 \cdot \text{PCT}_{4,6} + \text{Sun}_7 \cdot \text{PCT}_{4,7} + \text{Sun}_{10} \cdot \text{PCT}_{4,10} + \text{Sun}_{11} \cdot \text{PCT}_{4,11} \\ \text{Sun}_2 \cdot \text{PCT}_{5,2} + \text{Sun}_3 \cdot \text{PCT}_{5,3} + \text{Sun}_6 \cdot \text{PCT}_{5,6} + \text{Sun}_7 \cdot \text{PCT}_{5,7} + \text{Sun}_{10} \cdot \text{PCT}_{5,10} + \text{Sun}_{11} \cdot \text{PCT}_{5,11} \\ \text{Sun}_1 \cdot \text{PCT}_{6,1} + \text{Sun}_4 \cdot \text{PCT}_{6,4} + \text{Sun}_5 \cdot \text{PCT}_{6,5} + \text{Sun}_8 \cdot \text{PCT}_{6,8} + \text{Sun}_9 \cdot \text{PCT}_{6,9} + \text{Sun}_{12} \cdot \text{PCT}_{6,12} \\ \text{Sun}_1 \cdot \text{PCT}_{7,1} + \text{Sun}_4 \cdot \text{PCT}_{7,4} + \text{Sun}_5 \cdot \text{PCT}_{7,5} + \text{Sun}_8 \cdot \text{PCT}_{7,8} + \text{Sun}_9 \cdot \text{PCT}_{7,9} + \text{Sun}_{12} \cdot \text{PCT}_{7,12} \\ \text{Sun}_2 \cdot \text{PCT}_{8,2} + \text{Sun}_3 \cdot \text{PCT}_{8,3} + \text{Sun}_6 \cdot \text{PCT}_{8,6} + \text{Sun}_7 \cdot \text{PCT}_{8,7} + \text{Sun}_{10} \cdot \text{PCT}_{8,10} + \text{Sun}_{11} \cdot \text{PCT}_{8,11} \\ \text{Sun}_2 \cdot \text{PCT}_{9,2} + \text{Sun}_3 \cdot \text{PCT}_{9,3} + \text{Sun}_6 \cdot \text{PCT}_{9,6} + \text{Sun}_7 \cdot \text{PCT}_{9,7} + \text{Sun}_{10} \cdot \text{PCT}_{9,10} + \text{Sun}_{11} \cdot \text{PCT}_{9,11} \\ \text{Sun}_1 \cdot \text{PCT}_{10,1} + \text{Sun}_4 \cdot \text{PCT}_{10,4} + \text{Sun}_5 \cdot \text{PCT}_{10,5} + \text{Sun}_8 \cdot \text{PCT}_{10,8} + \text{Sun}_9 \cdot \text{PCT}_{10,9} + \text{Sun}_{12} \cdot \text{PCT}_{10,12} \\ \text{Sun}_1 \cdot \text{PCT}_{11,1} + \text{Sun}_4 \cdot \text{PCT}_{11,4} + \text{Sun}_5 \cdot \text{PCT}_{11,5} + \text{Sun}_8 \cdot \text{PCT}_{11,8} + \text{Sun}_9 \cdot \text{PCT}_{11,9} + \text{Sun}_{12} \cdot \text{PCT}_{11,12} \\ \text{Sun}_2 \cdot \text{PCT}_{12,2} + \text{Sun}_3 \cdot \text{PCT}_{12,3} + \text{Sun}_6 \cdot \text{PCT}_{12,6} + \text{Sun}_7 \cdot \text{PCT}_{12,7} + \text{Sun}_{10} \cdot \text{PCT}_{12,10} + \text{Sun}_{11} \cdot \text{PCT}_{12,11} \end{array} \right)$$

Check the math:

$$\sum \text{Champ} = 1.0000$$

Format and display results:

Results := augment(Team, Fri, Sat, Sun, Champ)

Results2 := reverse(csort(Results, 5))

Results =

	<u>Fri</u>	<u>Sat</u>	<u>Sun</u>	<u>Champ</u>
"North Carolina"	1.0000	0.8603	0.6604	0.5090
"Virginia"	1.0000	0.2779	0.1020	0.0179
"Virginia Tech"	1.0000	0.4186	0.1568	0.0338
"Boston College"	1.0000	0.3006	0.0509	0.0172
"Maryland"	0.9239	0.6849	0.2357	0.1369
"Georgia Tech"	0.8859	0.5607	0.2782	0.0865
"Duke"	0.8996	0.6946	0.4551	0.1785
"Clemson"	0.5449	0.0815	0.0318	0.0123
"Florida St."	0.4551	0.0583	0.0204	0.0071
"North Carolina St."	0.1004	0.0275	0.0051	0.0004
"Wake Forest"	0.1141	0.0207	0.0027	0.0002
"Miami FL"	0.0761	0.0145	0.0007	0.0001

Results2 =

	<u>Fri</u>	<u>Sat</u>	<u>Sun</u>	<u>Champ</u>
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